

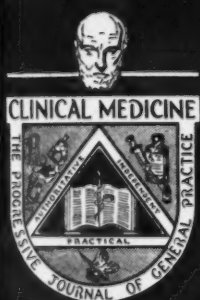
CLINICAL MEDICINE

LEADING ARTICLES

	Page
Accuracy in Diagnosis	215
The Acute Surgical Abdomen: Diagnosis and Choice of Procedure After the Abdomen Is Opened	218
Physical Medicine in General Practice	227
When the Veteran Returns: Medical and Other Problems	235
Pictorial Section	229
Editorials	240
Tropical Diseases You Should Know (Graduate Course)	242

COMPLETE TABLE OF CONTENTS ON
ADVERTISING PAGE FOUR

Copyright 1945
by The American Journal of Clinical Medicine, Inc.





STAND BY! Important announcement!



The intravenous administration of dilute ethyl alcohol as a supportive treatment for the control of pain and restlessness has been reported* as having significant value both in surgical cases and in certain diseases. In properly-selected cases it has been found capable of supplanting morphine, thereby eliminating the undesirable side-effects of that drug. ● Abbott's Alcohol 5% v/v in Beclysyl is a new addition to the well-known Beclysyl group of solutions for intravenous use. ● As metabolism of dextrose is known to require B complex vitamins, the administration of unfortified dextrose solutions may create an actual vitamin B deficiency. For this reason the necessary B complex vitamins have been incorporated in all Beclysyl solutions in amounts believed correct for the metabolism of the carbohydrate. ● Abbott's Alcohol 5% v/v in Beclysyl therefore can be considered as a "big three" in its

triple role as a postoperative analgesic and sedative . . . as a nutrient providing dextrose with sodium chloride and as a prophylactic against vitamin B deficiencies. ● It is dispensed in the simple, and convenient Abbott Venoclysis Equipment supplied for all Abbott intravenous fluids. You may order Alcohol 5% v/v in Beclysyl with complete confidence and in preference to the usual postoperative venoclysis. ABBOTT LABORATORIES, North Chicago, Illinois.

**Alcohol 5% v/v
in Beclysyl**

REG. U. S. PAT. OFF.

*Craddock, F. H., and Craddock, F. H., Sr. (1942). Intravenous Alcohol in Postoperative Analgesia, J. Med. Assn. Alabama, 12:134, November.

Rasmussen, Nathaniel G. (1945). Intravenous Alcohol, Jackson Clinic Bulletin, Vol. 7, No. 2, March.

CLINICAL

GEORGE B. LAKE, Jr.

Publisher



MEDICINE

RALPH L. GORRELL, M.D.

Editor

EDITORIAL STAFF

FRANK THOMAS WOODBURY, B.A., M.D.

W. A. N. DORLAND, M.D., F.A.C.S.

GENTZ PERRY, M.D., F.A.C.R.

ERNEST WITBSKY, M.D.

IRVING J. WOLMAN, M.D.

N. S. DAVIS III, M.D.

L. DOUGLAS VAN ANTWERP, M.D., F.A.C.P.

HAROLD SWANBERG, M.D., F.A.C.P.

HERMAN J. ACHARD, M.D.

HOWARD E. CURL, M.D.

KARL J. KARNAKY, M.D.

T. T. JOB, PH.D.

VOLUME 52

JULY, 1945

NUMBER 7

Accuracy in Diagnosis

By JAMES BURNET, M.D., F.R.C.P.E., Edinburgh, Scotland

ACCURACY in diagnosis is of first importance in practice, next to proper treatment, for unless we have arrived at a correct conclusion as to the nature of the patient's illness any treatment given must always be of an empirical nature. Diagnostic skill no doubt comes from long experience, but it can be acquired fairly early in practice if care and attention are given to the art of diagnosis.

My personal experience is that within recent years accuracy in diagnosis is not one of the average general practitioner's strong points. There are various causes which contribute to this lack of skill, apart altogether from mere carelessness on the part of the medical man. Our training of students is faulty. Too often our younger teachers are not themselves gifted with the art of instilling the necessary knowledge into the minds of learners. There is good reason for the establishment of staff colleges where medical teachers would receive the necessary training from older and more experienced men. Appointments to teaching posts in our universities and colleges are too often given to those who have won a certain renown from their work in the research laboratory on animals. They have not the necessary qualifications for imparting practical knowledge.

Then, again, students are burdened with lectures on experimental physiology

and pharmacology which are of absolutely no use as a training for their life's work. In other words, then, teachers have little or no practical acquaintance with human medicine, and of course it follows as a consequence that a knowledge of diagnosis is not theirs to impart.

A very potent cause for inaccuracy in diagnosis is that there is too much reliance placed on special diagnostic instruments today and so the practitioner loses his skill in personal efforts at diagnosis. The X-rays, the electrocardiograph, the sphygmomanometer and other means of diagnosis are taking the place of the fingers, the eye and the ear of the doctor. Too much dependence is placed on those instruments at the present time. They should merely supplement and endorse, or otherwise, the conclusions arrived at by using the finger on the pulse, the stethoscope on the chest and the eye on the patient generally. How many men estimate the patient's pulse thoughtfully? And yet one can by means of three fingers alone tell its rate, its rhythm, the character of the vessel walls and even the blood-pressure, within limits.

Monaural Stethoscope

As regards the examination of the chest nothing will ever replace the monaural stethoscope for giving an accurate diagnosis of cardiac and respiratory con-

ditions. The binaural stethoscope has its advantages, but it can never take the place of the old-fashioned variety, so often scoffed at in these days of so-called progress. In teaching students, I have been able to get them to hear heart sounds and murmurs, rhonchi and rales, and to distinguish various types of breathing by compelling them to listen with a monaural instrument, all of which they could not distinguish after months of previous striving with some of the more complicated binaural varieties of stethoscope. For accuracy in diagnosis, I shall never relinquish the monaural stethoscope.

As regards the electrocardiograph, I can only say that on one occasion it showed a sound heart and yet the patient died two months later from an attack of coronary thrombosis. The X-rays may indicate no tuberculosis of the lung and no malignant change in stomach or bowel although these conditions may be actually present. A very important note in this respect should be made of the fact that pulmonary fibrosis (silicosis) is not detectable in its early stages by X-rays, although it can usually be detected by the stethoscope of an experienced listener.

I have referred to the use of the fingers, the ear and the eye in diagnosis. Too little use of these is being made today. I often ask students and even practitioners the question: What is the condition of the patient's tongue? Few can tell me for it is rarely looked at, and yet how much may be learned from the appearance of that sensitive organ—the nature of any fur and its extent, the colour of the tongue and its size, and so on. All these things convey certain preliminary information which is often very helpful in arriving at a correct diagnosis. Then, again, the eye can detect the colour of the patient's lips, the character of the breathing, pulsations in the neck, the nature of the pupils and the presence of skin rashes. Even by carefully looking at the patient one can often arrive at a tentative diagnosis at least.

"Influenza"

There are three diseases which should never be given as diagnoses without the most assiduous care as to accuracy. These are influenza, gastritis and hemorrhoids. Of all offenders the first-mentioned is by far the most frequent. "Influenza" is too often given as the diagnosis when the patient is merely suffering from the effects of an ordinary chill.

This is not of very much consequence, perhaps, but when influenza is diagnosed when the patient is suffering from acute rheumatism or pneumonia it becomes a very serious matter. I have known a child who was said to have had an attack of influenza six months previously because she complained of pains in the limbs and a sore throat, but who must have been suffering at that time from acute rheumatism, as when I saw her in consultation she had a presystolic mitral murmur with some hemoptysis.

Another case of so-called 'influenza,' when seen in consultation, turned out to be a typical broncho-pneumonia which terminated fatally within twenty-four hours after my examination. He had been ill for a week. Another very typical case of lobar pneumonia had been given the diagnosis of 'influenza,' although his breathing, cough and temperature were all perfectly typical of pneumonia. I could multiply examples.

My advice is: Never give a diagnosis of 'influenza' until you have made absolutely certain that it is not something else and have eliminated all other possibilities. I am more than ever convinced that reports of epidemics of 'influenza' and of deaths from 'influenzal pneumonia' should be accepted with considerable suspicion. I say so because I know how often the diagnosis is given quite wrongly and health statistics are thereby vitiated.

I am one of those who do not believe that pneumonia need be an abnormally fatal disease. Long before the introduction of the sulphonamides or pneumococcic serum I was able to cure even severe cases by means of brandy, strychnine and good nursing, provided the patients were not confirmed alcoholics. I am told by the experimental pharmacologist that these drugs are useless. I say, with the greatest respect, that that is all nonsense. In any case, it is fatal to mistake pneumonia or rheumatic fever and to make a diagnosis of 'influenza' in such cases.

"Gastritis"

Gastritis is another very common misnomer. To me such a diagnosis means nothing. It is made whenever a patient has any of the evidences of indigestion. I have known this diagnosis to be given when the real condition was peptic ulcer or, worst of all, cancer in its early stage. My practice has always been to insist on a most thorough investigation in all such cases. It is usually

too late to operate on a patient when a tumour is easily palpable. I have also found 'gastritis' given as a diagnosis in cases of cholelithiasis and cholecystitis. No doubt it is a handy nomenclature, but it is far too often inaccurate and only leads to trouble later on.

"Hemorrhoids"

Hemorrhoids should never be diagnosed without a local investigation. More particularly it should be remembered that the patient's symptoms may be strongly suggestive of piles, but that he may be actually suffering from rectal cancer. Some years ago I remember seeing an out-patient at one of our institutions who had been diagnosed as 'bleeding piles' some time before by a youthful resident surgeon. As his history was one of occasional bleeding from the rectum and the passage at times of 'bloody slime' I referred him to one of the surgical seniors who reported back that the patient had definitely a malignant growth in the rectum. I wonder how many such patients are told they are suffering from 'piles' when a local examination would have convinced the doctor that his diagnosis was entirely erroneous.

"Pneumonia"

Pneumonia, of course, is quite frequently wrongly diagnosed, especially at the commencement of the patient's illness. Apart from its diagnosis as 'influenza' referred to above, I have found pneumonia wrongly diagnosed as 'appendicitis,' 'congestion of the liver' and even as 'acidosis,' to mention only a few inaccuracies I have encountered in recent years.

I may mention in conclusion some of the other erroneous diagnoses I have met with, (erroneous because the doctor was inaccurate). A case of thyrotoxicosis was mistaken for duodenal ulcer because the patient's chief complaint was pain after eating, although the thyroid gland was enlarged and the patient was suffering from an attack of auricular fibrillation.

"Cardiac-Gallbladder Disease"

The relation of cardiac and gallbladder disease frequently leads to the heart condition being overlooked. In two such cases within my recollection death was somewhat sudden and altogether unexpected by the medical attendant.

I can never forget a famous tuberculous specialist wrongly diagnosing 'tuberculous pleurisy' in a young woman who was suffering from leukemia. She complained of pain on the left side due to splenitis and as she was pale and losing flesh he at once came to the conclusion that she was tuberculous. She most decidedly was not. It is well to remember that an aortic aneurism may cause pain in the epigastrium which is almost sure to be mistaken unless a thorough examination of the chest is carried out. I have known two such cases to terminate by sudden and unsuspected rupture. Meningitis in children may be wrongly diagnosed. A children's specialist once gave this diagnosis, but the meningeal condition vanished when the child cut a canine tooth! I was once called in consultation to see an infant with supposed 'tuberculous meningitis'. When he was completely stripped the diagnosis was obviously severe varicella and the infant made a good recovery.

Puerperal Pyuria

It is well to remember that pyelitis can occur in the puerperium as well as during pregnancy. I find this is not sufficiently well known, and have met with such cases which puzzled the medical attendant simply because he had not thought of examining the urine. By the way, this disease in the young may simulate tuberculosis should it be allowed to become chronic.

Lastly, how often have I seen cases of disseminated sclerosis in its early stages wrongly diagnosed as 'hysteria'. The latter is a handy but often wrong diagnosis to give. Space alone prevents further discussion of this important subject. Accuracy in diagnosis is what we must constantly aim at. Bureaucratic control of medicine will, I fear, not favour our progress towards this most desirable goal.

The first step toward cure is to know what the disease is. (*Ad sanitatem gradus est novisse morbum.*)—Latin Proverb.

The Acute Surgical Abdomen: Diagnosis and Choice of Procedure After the Abdomen Is Opened*

By JOEL W. BAKER, M.D., Seattle, Washington

WITH the aid of color photographs† of fresh specimens, I have reviewed some of the more usual acute abdominal conditions which we have encountered in emergency operations. For the most part, no attempt will be made to go into *preoperative* differential diagnosis. It is after the abdomen is opened, and this often in the middle of the night, when one is short-handed for a surgical team, that irreversible decisions must be made. The mortality and future morbidity of the patient hang for that moment upon the judgment of the surgeon. The surgical judgment that determines the true condition and prompts the correct procedure deepens with personal experience but can be enhanced by consideration of the mistakes, successes and opinions of others. For that reason, I will confine this review to our own experiences, supplemented by the impressions we have gained therefrom.

Acute Appendicitis

Acute appendicitis is the most common emergency, and appendectomy is supposed to be a *simple* operation. There is probably not one in this room but who has "sweat blood" over an appendectomy, which to me can be a severe test of skill and judgment. A few principles to which we subscribe are:

1. The importance of a gridiron or lateral transverse incision, since this approach exposes the appendix from the lateral iliac gutter with a minimum of trauma to the intestine, and a minimum dissemination of the infection to the general peritoneum. The preoperative determination of the exact site of maximum tenderness is helpful in accurately placing the incision. Retrograde amputation of the appendix occasionally solves a difficult technical problem.

2. The local instillation of sulfathiazole microcrystals. While it has not been proven that these drugs are more effective when applied locally than when

given orally or parenterally, nevertheless such local administration insures an adequate concentration at the seat of trouble in the first 48 hours, a time when the oral route is unusable, and the venous one required for other fluids. If the omentum is free and accessible, it should be pulled down over the cecum, and a homogenous suspension of the drug deposited over it. The omentum is a natural barrier to infection and a guard against visceroparietal adhesions. If the drug is instilled over its surface instead of over the bowel, secondary adhesions of the intestine should be prevented. Ogilvie¹ in a recent report of war injuries prefers a suspension of 10 gms. of sulfadiazine suspended in 30 cc. of saline.

3. In our surgical division a soft penrose drain is still preferred if the perforation has resulted in a *localized abscess bordered by necrotic tissue*. This drain should be left to emerge between the omentum and parietes and not next to a loop of bowel. This can be accomplished more directly in the gridiron incision than in a rectus incision. While a localized pocket may be advantageously drained, the general peritoneal cavity, for anatomical reasons, can not, and the patient with generalized exudate (or transudate) will get along better if this is not attempted.

When the Appendix Is Not Inflamed

But it may happen that in the emergency we have opened the abdomen for appendicitis and find that the appendix is *not* inflamed. It is then that we should not lull ourselves into a feeling of false security but instead should spare no effort to make certain that the source of the colic, leukocytosis and fever is found before closing — and this exploration should be satisfactorily completed *before* the innocent appendix is removed. Parenthetically, by the same token, in *elective* laparotomy the surgeon should make it a rule to explore the entire abdomen before surgical correction of any part. Here too the preoperative diagnosis may not be complete; it would be

*Delivered before the Virginia Mason Hospital Staff at its monthly Meeting, May 3, 1944.
†Author's note: Since it is impractical to publish these photographs in color the same are given in black and white. Obviously, the gross pathology is not as instructive, and many are therefore omitted.

¹*Surgery, Gynecology & Obstetrics*, Vol. 78, p. 225, March 1944.



Fig. 1

An appendix found in the center of a pelvis. The preoperative impression favored acute salpingitis.

embarrassing to remove gallstones before we discovered an undiagnosed carcinoma of the cecum.

Some of the emergency operations undertaken by us on the mistaken diagnosis of acute appendicitis have disclosed acute salpingitis, acute diverticulitis, perforated peptic ulcer, regional enteritis, mesenteric adenitis, acute cholecystitis, and others. I should like to discuss the attendant problems from the viewpoint of one who discovers his mistake only after the abdomen is opened. As already inferred, it is better to discover the mistake that late — than never.

Acute Salpingitis

Not too rarely inflammation in the long appendix hanging over the pelvic brim cannot be safely differentiated from pelvic peritonitis secondary to acute salpingitis. (Fig. 1) In such instance it would seem safer to open the abdomen and insure the diagnosis. Here too we prefer to use a McBurney incision to remove the appendix, push the omentum into the pelvis, instill sulfathiazole suspension and close the abdomen without molesting the tubes except for gentle inspection of the right tube to insure the diagnosis. I have seen no complication from such surgical intervention in the early hours of a doubtful case. I have

seen death follow non-intervention, and autopsy showed a ruptured appendix instead of salpingitis.

Please do not infer from this that we make a practice of operating in salpingitis; but we do wish to re-emphasize that an inflamed pelvic appendix can be indistinguishable from salpingitis and that in the doubtful case the appendix can be removed without harm if it is done thru a McBurney incision. A mid-line incision would add trauma and dissemination and would be more susceptible to evisceration in the event of abdominal distention.

It should be added, however, that in older women who have obstructed fibrotic tubes of long standing, we would not hesitate to make a secondary mid-line incision and do a bilateral salpingectomy—even with hysterectomy. (Fig. 2). If such condition prevails the patient has already lost the function of her tubes, and early removal in the acute exacerbation of the attack will shorten convalescence and prevent recurrence. However, it should be reiterated that the acute "dripping tube" is not obstructed and will recover its normal function and should not be sacrificed merely because of a mistaken preoperative diagnosis.

Acute Diverticulitis

If the appendix is normal, the leukocytosis may be explained by exploratory palpation of a suppurative indurated diverticulitis. The offending diverticulum may be Meckel's, 18 to 30 inches above the ileocecal valve. A longitudinal excision of the diverticulum with transverse closure of the ileum after the Ramstedt principle is then indicated. In older people one should search the large bowel for diverticulitis. (Fig. 3). If palpation of the descending colon or sigmoid colon discovers a mass, and the patient has leukocytosis and fever at the time of the laparotomy, then the involvement is probably sufficiently advanced to require some type of defunction of the involved bowel. This has happened in emergency to us. The thought of diverticulitis or cancer having been overlooked preoperatively, we have been confronted with this situation in the abdomen without the aid of roentgenological information as to the type and degree of obstruction. Nevertheless, the added surgical trauma may precipitate complete obstruction (even perforation and peritonitis) if the surgeon does not recognize the preoperative mistake and promptly defunction the involved bowel.

Depending upon the severity of inflammation and obstruction this may be par-



Fig. 2

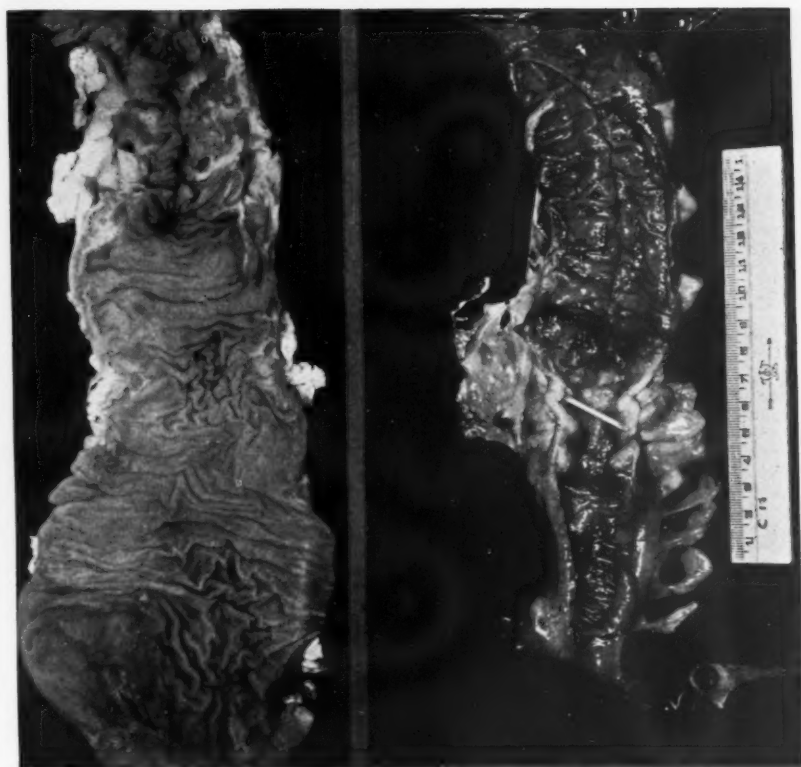
The end result of a long standing pelvic inflammatory disease. Here the entire internal genitalia have been surgically extirpated after complete pathological destruction. This is an entirely different picture from the acute "dripping" fallopian tube which should not be removed just because of a mistaken preoperative diagnosis.

tial defunction, with a cecostomy thru the original McBurney incision, or preferably, a complete defunction, with a colostomy proximal to the diverticulitis; this can be accomplished through a secondary incision over the transverse colon, or over a redundant sigmoid. Depending upon the subsequent resolution of the lesion, as demonstrated by x-ray, the involved sleeve may or may not require resection before the temporary colostomy can be closed. More often the offending sleeve of colon will require resection before one feels secure in turning the fecal stream over it again. However, in two instances, we have, after one year of defunction, restored the un-resected bowel to function without subsequent trouble. Nevertheless, the hazard of inflammatory exacerbation as well as the possibility of coincident cancer dictate careful x-ray follow-up, if resection is not elected. One will be much happier in his surgical career if his diagnostic acumen encompasses this condition in the preoperative emergency. Then he may have roentgenological aid in deciding for or against surgical interference.

Still another possibility is a normal appendix, and yet the presence of a

mass in the butt of the cecum, with superimposed infection to explain the local tenderness, rigidity and leukocytosis. This may be a carcinoma (Fig. 4), and a one or two stage resection indicated. If one is not prepared in the emergency to resect, he should not molest the appendix as this is unnecessary and may result in a fistula; but instead, he should close the abdomen and plan thereafter for a prompt and radical surgical resection after the necessary preparation.

The texture and predominantly inflammatory appearance of a small cecal mass may instead lead one to suspect an inflamed solitary diverticulum of the cecum. (Fig. 5). While only 37 such cases have been reported in the literature, it so happens we have had three in the past 18 months, and I suspect that the condition is not always recognized and hence may be worth mentioning. Dr. Thomas B. Carille and I reported 2 cases in the *Journal of the American Medical Association* for June 5, 1943, and have had 2 more cases since that publication. Local excision by partial cecectomy has resulted in uncomplicated recovery in three (Fig. 6); in a fourth because of uncertainty as to diagnosis,



A

Fig. 3

B

- a). An inflammatory fibrotic sleeve obstructing the sigmoid; this was secondary to an acute diverticulitis.
 b). A sleeve of carcinoma obstructing the sigmoid. Contrast this appearance with the benign lesion in a. Each caused complete obstruction.

the abdomen was closed without resection. Subsequent x-rays (Fig. 7) demonstrated the solitary diverticulum to confirm the surgical diagnosis. After six months this was shown to be completely healed; and the patient has remained well since. This fact should be remembered if you are not prepared for partial cecectomy, and if the diverticulum is not perforated or gangrenous; in the first case the diverticulum was gangrenous and left no alternative to resection.

Acutely Perforated Peptic Ulcer

While in the first 6 to 12 hours an acutely perforated peptic ulcer may be mistaken preoperatively for an acutely gangrenous gallbladder, or acute pancreatitis, after 6 hours or more the picture may be taken instead for acute ap-

pendicitis. The agonizing pain and rigidity may have become replaced by localized pain and tenderness over the right lower quadrant, and leukocytosis will have developed. This, of course, is due to gravitation of the free duodenal content down the right iliac gutter with beginning peritonitis in this dependent area. Usually, a careful history, percussion of liver dullness, and x-ray of the diaphragm for free gas will prevent this mistake, but the best diagnostician will be in a quandary at times. In such cases, if the likelihood of appendicitis seems the greater, it is wise to enter thru a lower McBurney incision, but beforehand to give an ounce of methylene blue by mouth. If methylene blue presents in the iliac gutter this incision can be closed without further trauma, and a

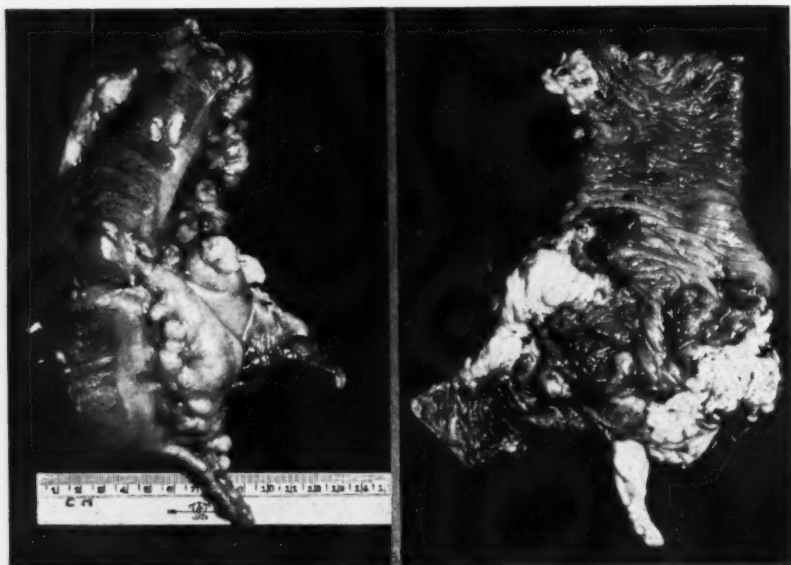


Fig. 4 (Top)

External and internal view of a carcinoma of the cecum just above the ileocecal juncture. The appendix is often dilated and enlarged by carcinoma which obstructs the ascending colon.

Fig. 5 (Center)

Diagrammatic drawing of our first case of gangrenous solitary diverticulitis of the cecum. The inset shows a sagittal section of the gangrenous diverticulum removed by partial cecectomy.

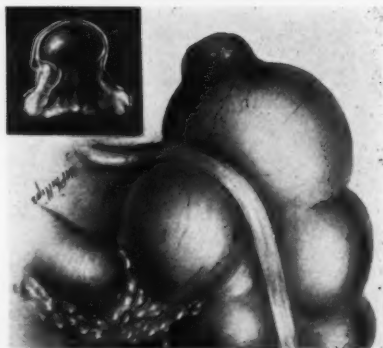
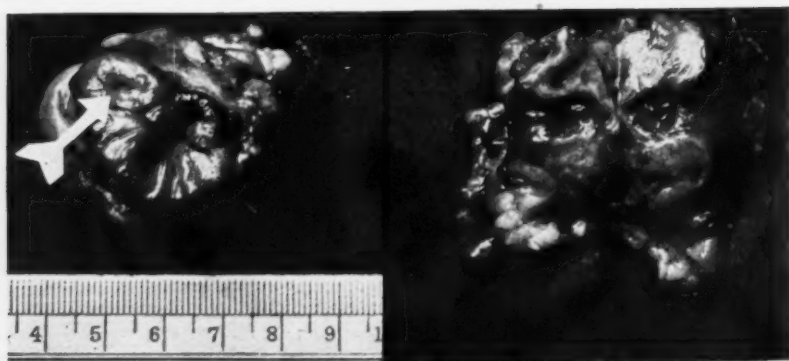


Fig. 6 (Bottom)

Actual photograph of another inflamed solitary diverticulum removed from the cecum. The preoperative diagnosis was acute appendicitis.



second upper abdominal incision made. If this precaution has not been taken, one should not mistake duodenal content about a normal appendix, and mistakenly interpret it as peritoneal transudate or exudate, secondary to an acute appendicitis. To overlook the real source of trouble may be fatal.

Where the weight of evidence is in favour of a perforated duodenal ulcer we prefer an upper transverse incision (Fig. 8). This should be made one inch above the umbilicus. In the tall patient with a narrow costal arch the usual vertical incision may prove better. As a rule, however, the transverse incision gives a better immediate exposure and is easier to close in a patient not deeply relaxed, and this may often be the case in such a brief operation.

In this country and in England surgical preference seems to be for simple closure of the ulcer, while on the European continent gastric resection is more often done. We definitely prefer simple closure, and the simplest, easiest closure is that advocated by Roscoe Graham, of tacking omentum over the perforation. Inverting stitches are difficult to take in the inflamed duodenum, are not as secure, and may cause duodenal obstruction in varying degree.

Occasionally, a large perforation of the gastric side (Fig. 9) may lead the surgeon to suspect malignancy; in such in-

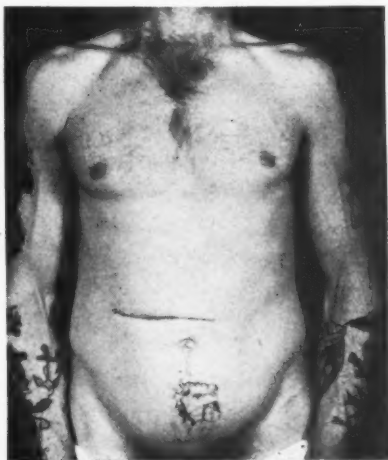


Fig. 8

A transverse incision is preferred to expose acutely perforated duodenal ulcer.



Fig. 7

Postoperative x-ray demonstrating a solitary diverticulum of the cecum which was found at operation undertaken on the mistaken diagnosis of acute appendicitis. This diverticulum was inflamed, but not gangrenous, and was not removed. Six months later it had completely healed.

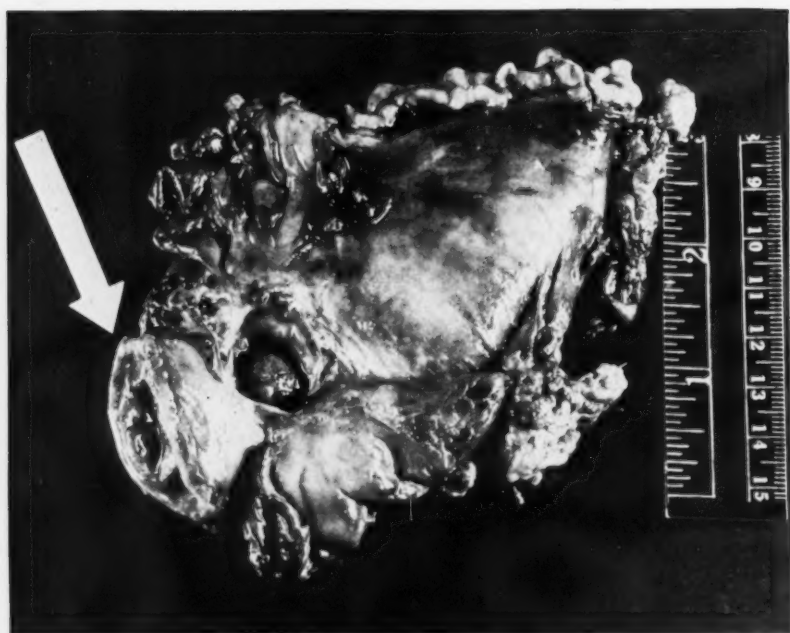


Fig. 9

Photograph of a complete anterior perforation of a large prepyloric ulcer. Because of suspected malignancy a partial gastric resection was done. Histological examination confirmed the impression of carcinoma.

stance if peritonitis has not developed, one should do a subtotal gastrectomy. In the rare instance when this becomes necessary, the transverse incision may be extended vertically, or transversely across the left rectus.

Regional Enteritis

In the first stage of its development the symptoms and signs of terminal ileitis are those of peritoneal irritation, — namely, pain in the right lower quadrant, fever, leukocytosis, tenderness and spasm. It is that stage that so often has erroneously been diagnosed as acute appendicitis, and at which operation has disclosed an edematous injected loop of terminal ileum, with edema and hyperplastic adenopathy of the mesentery, and an excess of free peritoneal fluid. The appendix is not involved. Here again, one should accept one's mistake gracefully and close the abdomen. To remove the appendix will avail nothing, and will promote fistula formation. Surgical bypass or resection is reserved in this condition for the later stages, in which ulceration followed by fibrosis and

fistula formation have resulted in obstruction and penetrating masses, (Fig. 10). The possibility of skip areas demands examination by x-ray and by the surgeon of the *entire* intestinal tract, from duodenum to rectal ampulla, before attacking any part.

Electively in these conditions there is distinct advantage to threading the length of the small bowel upon a Miller-Abbott tube before laparotomy. This permits quick examination of the entire bowel and safeguards the subsequent anastomosis.

The symptoms in the *ulcerative* phase are those suggestive of a mild ulcerative colitis, with cramplike pain, and frequent loose stools. This progresses insensibly into a fibrotic thickening of the bowel wall so that the segment becomes rigid and *hoselike*, creating the so-called "string-sign" on x-ray and the clinical symptoms of obstruction. In the fourth stage penetration results in a palpable tender mass, and often fistula formation. Complete surgical defunction, with or without resection, in the

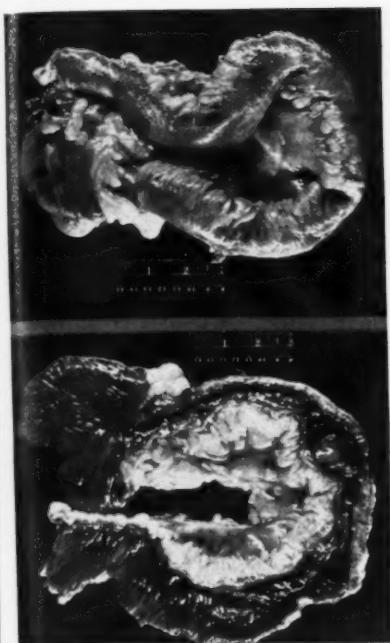


Fig. 10

- a) External view, showing the "cobblestoning" of the edematous thickened mesentery with extensive hyperplastic lymph adenopathy and the "hoselike" fibrotic thickening of the wall of the ileum and the ileocecal valve.
- b). Internal view showing the linear ulceration along the mesenteric border of the terminal ileum.

obstructive and fistula forming stages, is mandatory. The ileum is transected well above the highest skip area, the proximal end is anastomosed end-to-side to the transverse colon (or well below the lowest involvement of the colon) and the distal end is either brought out through the incision or closed and dropped back into the abdomen. Subsequent resection of the by-passed bowel will prove desirable in some of these.

Mesenteric Adenitis

We formerly believed that the incidence of palpable and visible hyperplastic lymphnodes in the mesentery of the terminal ileum was rare. However, since we have undertaken to search routinely for these nodes we are surprised to find such lymphadenopathy in sufficient numbers (probably 10% of cases) that we no longer attach as much significance to this finding.

Repeated biopsies of these nodes have failed to show tuberculosis, and follow-up in a number of patients has revealed no symptomatology of importance.

In children particularly, a high leukocytosis and mild abdominal cramps and tenderness, often with a history of frequent mild episodes, should prepare the surgeon, and he should not be surprised if he finds an appendix too benign to explain the high leukocyte count, provided search reveals this lymphadenopathy. (Leukocytosis is not always associated in this condition but may range from 15,000 to 30,000). Free peritoneal transudate is a rule in such cases. Appendectomy has been followed by relief of symptoms. No relationship has been demonstrated between this condition and regional enteritis or tuberculosis.

Acute Cholecystitis

When should one operate upon the patient with an acute fulminating cholecystitis? This remains controversial — probably the majority still favor the deferred operation. We prefer prompt operation for these patients. Acute obstruction of the cystic duct may result from incarcerated stone, with or without infection; obstruction of the cystic artery may ensue, followed by gangrene. The acute "strawberry" gallbladder of cholesterosis (Fig. 11A) has, in our experience, been seen to progress to gangrene. (Fig. 11B) And, on the other hand, we have the rare case of an acutely gangrenous gallbladder in a lady, age 83, in which there was no stone, gangrene having resulted from a thrombosis of the cystic artery, but there was no stone. As far as I know, there is no similar case on record. She was fortunate enough to recover following prompt cholecystectomy under local anesthesia.

For these reasons, and because what is thought to be an acute gallbladder may instead be an acute perforating duodenal ulcer, or an acute suppurative appendicitis, each of which demands prompt surgical intervention, — for all these reasons, therefore, we prefer prompt surgical interference in the acute upper quadrant of the abdomen, the same as in any other quadrant. By prompt intervention we do not wish to convey the impression that six hours or more for preparation and observation is out of order. Even should one lean towards the conservative side, one should be persuaded to interfere early if the pain, temperature and leukocytosis do not recede with repeated antispasmodics

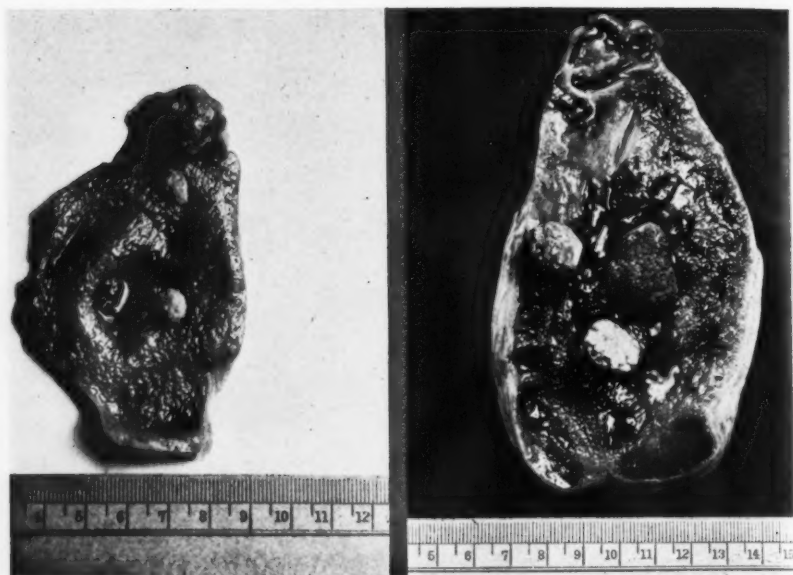


Fig. 11
a). So-called "strawberry" gallbladder of cholesterosis.
b). A similar gallbladder with complete cystic duct obstruction and beginning gangrene in the central portion.

and morphine within the first 12 to 14 hours.

One recent exception prompts us to mention that if the severity of the attack, along with an *elevated blood amylase*, suggests an associated acute pancreatitis, the 30% mortality will be reduced by *deferring* operation for from one to five days, during which time pain, shock, fever and rapid pulse should recede.

Nor do we let the severity of the attack deter us from attacking the common duct if we feel that this structure is involved. In the case of associated acute pancreatitis the common duct should be drained, and we prefer in addition to dilate the papilla of Vater. While the cause of acute pancreatitis is not established, this procedure should reduce biliary reflux into the pancreas, an etiological factor proven in some cases. The older idea of incising the capsule of

the pancreas is no longer practiced because the interlobular septi which extend throughout the organ make it anatomically impossible to drain the organ as a whole.

Comment

In considering the patient with a "surgical abdomen" one should take time before operation to ask himself: "What else could this be besides what I think it is?" This may save an unnecessary operation; it may prevent a hasty, injudicious approach to a major surgical problem.

Extra-abdominal conditions which may simulate abdominal surgical emergencies should be carefully ruled out; by the same token, the surgeon should be equally thorough in ruling out unsuspected intra-abdominal lesions after the abdomen is opened, once he finds that his preoperative diagnosis is in error.

Author's Note: Because of the proven incidence of intestinal adhesions following the intra-abdominal use of sulfa crystals we are now, except in exceptional cases, not using this drug intraperitoneally. We still use the drug in retro- and extra-peritoneal soft tissues, such as in the broad ligament following total hysterectomy; retroperitoneally, following colon resection; and impregnation of the drug in the abdominal incision at closure. This use of the drug is then supplemented by parenteral administration.

Physical Medicine in General Practice

By RICHARD KOVACS, M.D., *New York, N. Y.*

THE fact that the name of the Council of Physical Therapy has been recently changed to that of the Council on Physical Medicine, emphasizes the growing scope and importance of the former stepchild of the practice of medicine, physical therapy. In discussing the change, the *Journal of the American Medical Association* on July 29, 1944 says editorially: "The designation 'physical medicine' is a more inclusive term. Physical agents are used not only for therapy but also for diagnosis. Hospital departments of physical medicine, when they employ electric tests for reaction of degeneration or perform such tests as the cold pressor test, are employing physical agents not for therapy but for diagnosis." And later, "Physical medicine includes the employment of the physical and other effective properties of light, heat, cold, water, electricity, massage, manipulation, exercise and mechanical devices for physical and occupational therapy in the diagnosis and treatment of disease."

In spite of the impressive progress being made in many large centers in both research and clinical application of physical measures, their rational and efficient use by the general medical profession is still far from satisfactory and the problem of education still looms large. A frequent objection voiced by the uninformed is that physical therapists concern themselves with all too many pathological conditions, instead of remaining within a well-circumscribed domain. No such objection is voiced against the similar wide use of drug therapy in all departments of medicine. Dean Sollman stated before the American Congress of Physical Therapy, "...although drug therapy and drugless therapy may seem direct antipodes to the superficial thinker, they involve the same principles, evoke the same phenomena, accomplish the same results. They differ only in the means which they employ, of which sometimes the one, sometimes the other is better adapted to secure the desired end. Indeed, the differences between physical therapy and pharmacological therapy are no greater than those between radiant and direct heat, or between local and general anesthetics."

General Practice

The general practitioner should be able to employ simple thermal and hy-

diatric measures at the office and at the bedside of patients and to demonstrate and prescribe simple exercise for traumatic, arthritic and other every-day conditions. He should employ more elaborate apparatus only if he has had competent clinical instruction in their use and can himself devote either the necessary time or effectively supervise their application by his well-trained technicians.

There is need in every large center of population, and certainly in all large hospitals, for medical men with special training in general physical therapy who are able to render broad service with such modern resources as fever therapy, under water exercise, and some of the electric and light treatments. Special training and aptitude, as well as official support, are needed to carry on clinical observation and experimental research and to check on the claims for the ever-increasing number of new devices.

Thermotherapy

Thermotherapy or the employment of heat in its various forms is still the most universally applied physical treatment method. Heat when employed in mild intensity acts as a sedative on sensory and motor nerves; in more intense dosage it helps to accelerate circulation and helps in the absorption of products of inflammation; finally, in case of thermolabile organisms as the gonococcus, systemic heat in sufficiently intense degree acts as a bactericidal agent without impairing the human organism. Two forms of conductive heating have become increasingly popular in recent years, the whirlpool bath and the paraffin bath. The whirlpool bath, consisting of water at a temperature of 105° to 110° F. which is kept whirling in a small tank by its own pressure or by a motor, combines gentle friction with sustained heat and also allows active exercise under water, especially in recent traumatic and arthritic conditions with swelling and limitation of motion. The paraffin bath employs melted paraffin at a temperature from 110° to 125° F. preferably controlled thermostatically; it is more useful in chronic traumatic and arthritic conditions.

Short-wave diathermy was hailed, a few years ago, as a new thermal method of specific bactericidal and selective heating effects. Seasoned clinical and laboratory investigation has divested short-wave diathermy of these enthus-

istic claims, but has fully established its value as a fairly safe agent for deep tissue heating, offering the convenient new technics of air spaced electrodes and of inductance coil heating. Efforts to introduce dosimeters into short-wave diathermy which will estimate dosage in the same manner as the milliammeter in long-wave diathermy, have been unavailing; as a matter of fact the older method of heating by metal contact plates may be still considered superior in treating bursae and joints in such locations as the head or neck, where unnecessary heating of adjacent structures is to be avoided, or in treating heat sensitive patients.

Artificial fever therapy developed in the United States as a direct outgrowth of diathermy; later hyperthermia by air-conditioning and by hot water spray developed. At this time it is generally agreed that various methods of fever therapy can produce equally good results, as long as there is a suitable combination of elevation of temperature and its retention by insulation chiefly in cabinets. The original spectacular results in gonorrheal infections have been largely superseded by similar results by the much less cumbersome use of sulfa drugs; nevertheless, fever therapy still plays an important role in cases resistant or intolerant to sulfa medication. In cerebrospinal syphilis and its sequelae, in chorea, intractable bronchial asthma and selected rheumatoid conditions, artificial fever therapy has become a standard method of treatment, with a general tendency towards the use of less severe fevers, in degrees from 103° to 105° maintained for 3 to 5 hours.

Hypothermy

Hypothermy or the therapeutic use of cold has come to the fore in recent years, largely stimulated by clinical research of Fay and Smith. Here, again, the original claims for some specific action in inoperable malignancies have been abandoned, but, on the other hand, the scope of employment of hypothermy in military and industrial surgery and in peripheral vascular disease is still expanding. These uses are chiefly based on the fact that the employment of cold lessens the oxygen need of cells and decreases local metabolism; therefore, in treating gangrene in cold injuries and in burns, mild refrigeration helps recovery. On the same grounds a new conception of shock substitutes cold for heat in its treatment. For amputation of gangrenous extremities, an efficient technic of refrigeration anaesthesia has

been developed. The techniques of hypothermy are still under development, at present either direct packing with ice or mechanic refrigeration being employed.

Electric Shock Treatment

The method of inducing convulsions by means of an alternating current applied to the brain came about as an evolution from the more hazardous drug administration for shock therapy in mental disorders; it repeats the similar transition from drug therapy to physical therapy when physically induced fever therapy largely replaced malaria therapy. Electric shock therapy has proved especially applicable to the early stages of depressive mental conditions, in psychoses associated with alcoholism and in other toxic-organic psychoses; it has also been reported effective in acute mental depression due to the war, formerly misnamed shell-shock; the majority of patients with a good previous personality have been showing rapid improvement under such treatment.

Ultraviolet Radiation

Ultraviolet radiation has found a new field of applicability for air sterilization of operating rooms and for prevention of cross-infection in children's wards. Generators emitting almost exclusively the short ultraviolet radiation of 2,537 Angstroms serve for this purpose and the same type of radiation emitted from single treatment units has been also used with good success in superficial skin infections and for stimulation of sluggish wounds. After resumption of manufacturing for civilian needs and more clinical research there will be undoubtedly more interesting development in the field of actinic radiation.

Hydrotherapy And Spa-Therapy

The development of under water exercises in therapeutic pools has brought hydrotherapy into extensive use again. Originally introduced for the redevelopment of muscles weakened by infantile paralysis and unable to work against gravity outside of the water, pool exercise has been found useful in treatment of the sequelae of many traumatic conditions, of hemiplegia and chronic arthritis. The dramatic effects of early treatment by the Kenny method have definitely helped to curb the tendency of erecting too many costly pools, for much of this type of work can be done intelligently and more inexpensively in smaller units of the Hubbard tank type.

Spa-therapy, a long neglected field of

(Continued on page 233)

Removal of a Splinter

Soaking the hand, or other part, containing a splinter in hot soapy water for 15 minutes (while the instruments are boiling) will soften up the skin and permit easier removal.

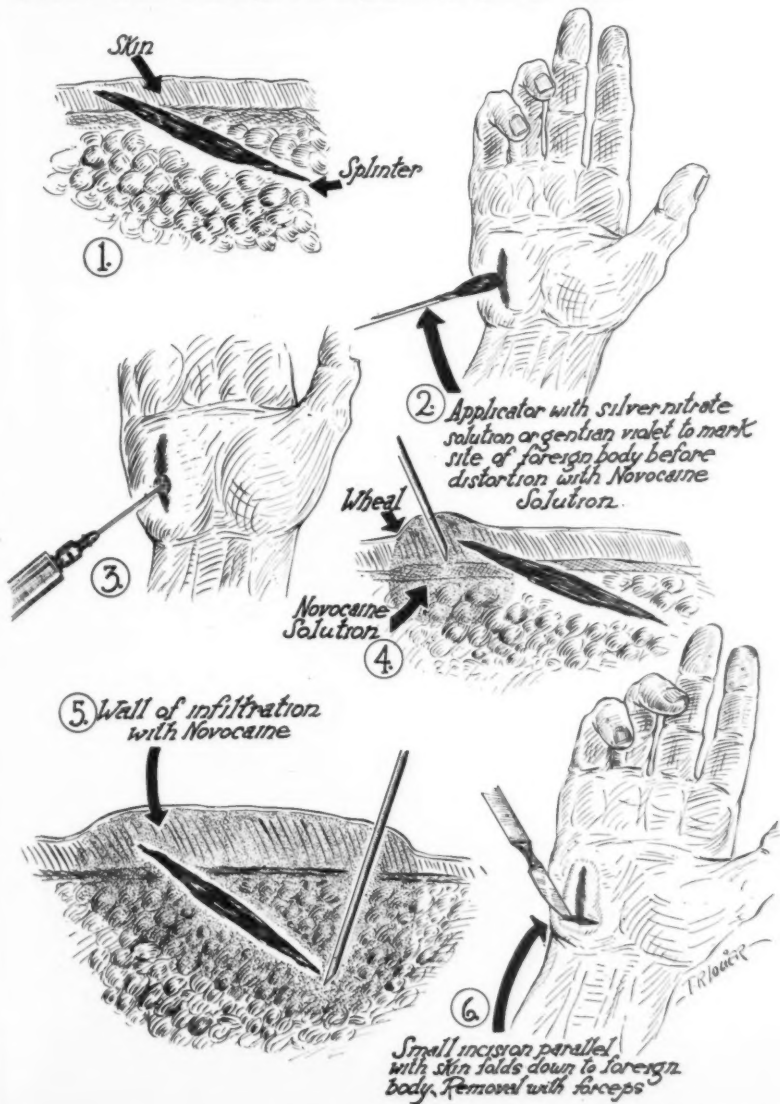
A table should be available on which the patient should lie down, so that he cannot see what is being done, and will not feel faint. A bright light should be so placed as to shine on the part and not in the doctor's eyes.

The best way to find a splinter is to work from the point of entry—do not try to guess where it should be. If a strong transillumination light, such as is used for illuminating the sinuses, is available it may be held against the skin nearby and indicate the splinter as a dark shadow in the bright area of skin light.

Suggestions illustrated here are: 1. Splinter driven diagonally into the skin. 2. Its location is marked after preliminary cleaning with soap and water. 3. 4. 5. Procaine solution is injected around the splinter. 6. A small incision is made parallel with skin folds down to the foreign body which is grasped with small forceps and removed.

If the splinter is dirty, broken, or if it has been in the tissues a number of hours, the incision should be made over its entire length so that all the area can be exposed, dirt or fragments removed, and cleansing with saline solution and hydrogen peroxide carried out.

Tetanus antitoxin should be given to all patients with puncture wounds.



Physical Therapy Treatment of Muscle and Joint Pain

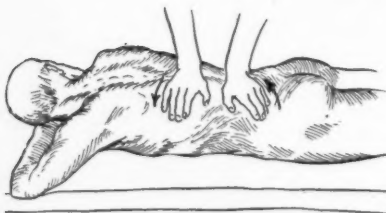


Fig. 1. Massage is a simple effective treatment of a painful back or extremity; its relaxing effect is so well known that a whole segment of the healing profession rely on it. Machines, though helpful, are not essential to good physical therapy.



Fig. 2. Relieving a painful sprained ankle by injecting 1 percent procaine (Novocaine) solution directly into the tender points. This injection is effective for painful shoulders, lumbago, muscle strain, minor fractures (fractured ribs, toes) and many other painful conditions.

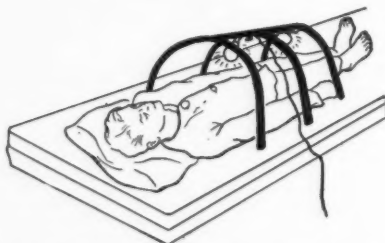


Fig. 3. Cut away view showing a "baker" that can be made or purchased inexpensively. Ordinary light sockets and bulbs are used. As soon as the patient is warm, all clothes are removed down to the waist. If more heat is desired, the frame may be enclosed with sheet metal, so that the heat is reflected down on the patient.

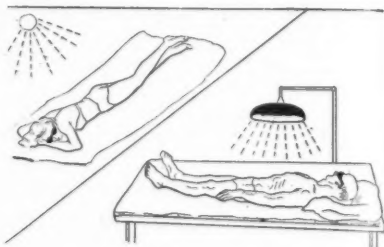


Fig. 4. Ultraviolet rays are effective in mild painful conditions.



Fig. 5. Short wave diathermy treatment of chest pain, pleurisy, pneumonia, intercostal neuralgia).



Fig. 6. Spraying a painful back with ethyl chloride relieves some of the pain and permits increased motion. An ordinary small cylinder of ethyl chloride, such as was formerly employed for "freezing" an abscess before incision, may be employed.

Physical Therapy Treatment of Muscle and Joint Pain



Fig. 7. Dipping painful or arthritic hands (or feet) in melted paraffin. The hand is dipped repeatedly until a paraffin "cast" forms, which is allowed to remain on for 20 to 30 minutes. Then the paraffin is peeled off and replaced in the pan to be used again.



Fig. 8. The whirlpool bath stimulates the circulation after fractures, injuries or infections in an extremity. The water and air bubbles are driven past the part by water force or by a motor-driven pump.



Fig. 9. Infra-red rays to a painful shoulder. Infra-red rays, followed by massage, is especially effective.

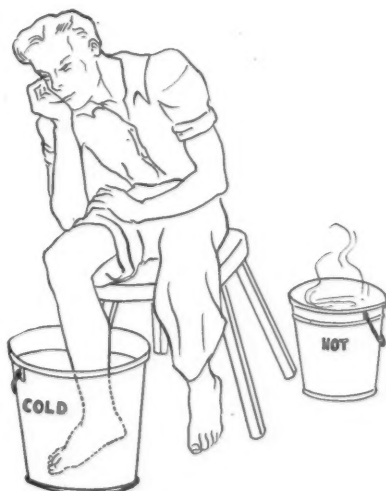


Fig. 10. Contrast baths, the use of alternating heat and cold to painful feet or hands, increase the circulation of the extremity by alternate vasoconstriction and vasodilation. The extremity is kept in hot water up to three minutes, in the cold 1 minute.

The Treatment of Warts

Adopted from current literature, the following methods of removal of warts are presented pictorially by a staff artist of CLINICAL MEDICINE:

Fig. 1. Procaine solution is injected around the wart, (b) Electrodesiccation is carried out. (c) The wart is charred. (d) The body of the wart is removed with small curved surgical scissors. (e) The base of the lesion is lightly desiccated. (f) Gentian violet solution is applied, followed by ammoniated mercury ointment.

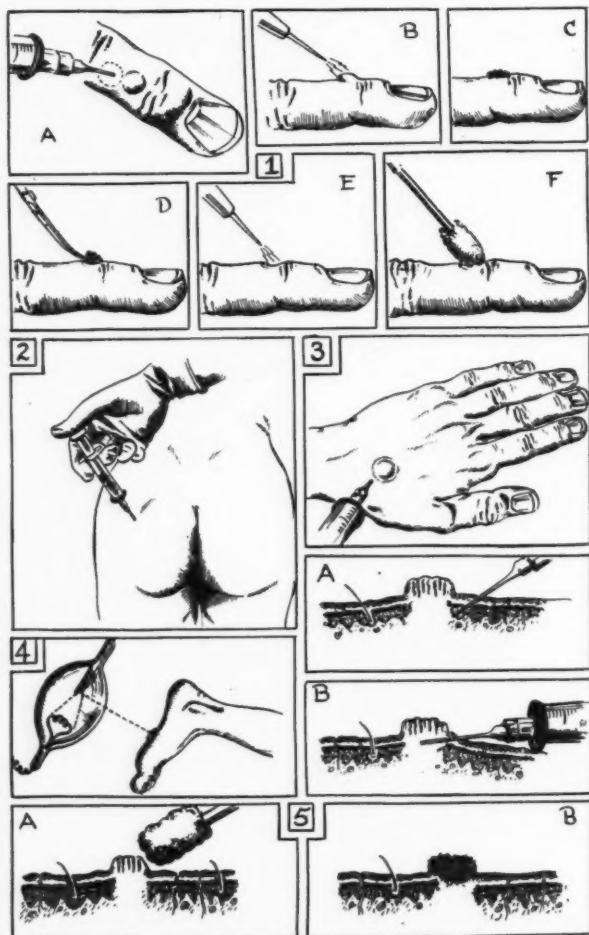
Fig. 2. Intramuscular injections of a soluble bismuth compound are given.

Fig. 3. A soluble bismuth compound is injected into the wart itself. (a) shows the in-

section of the needle $\frac{1}{8}$ of an inch from the wart, down into the subcutaneous tissues. (b) The point of the needle is raised so that it enters the base of the wart and the bismuth solution is injected.

Fig. 4. X-ray treatment of warts on the soles of the feet (plantar warts) is advised to avoid the painful, slow healing areas following destruction of such warts with electrodesiccation.

Fig. 5. The application of such escharotics as nitric or trichloroacetic acid is often effective but it is difficult to control the depth of tissue destruction. (a) illustrates the application of the solution to the lesion (not to the surrounding tissues) and (b) the blackened lesion resulting.



Physical Therapy in General Practice

(Continued from page 228)

combined physical therapeutic and medicinal activity, has been brought into the foreground of interest. Informed physicians have demanded for a long time that the medical profession as a whole should take more active interest in American Spas; as a result, three years ago the American Medical Association created a Committee on Health Resorts with the aim to survey American Spas and endeavor to bring their service to the sick to acceptable uniform standards. The Army, Navy and Veterans' Administration took over a number of well-known resorts for active utilization in the rehabilitation of the war disabled. It is to be hoped that under the impetus of these new developments a new era of a more general and more intelligent use of our health resorts will arise, instead of their misuse by the idle rich as society playgrounds or by commercial exploiters for much valueless treatment.

Exercise

The institution of a nation-wide program for rehabilitation of those disabled by war and war-connected industrial activity has also brought about widespread attention to the importance of exercise and physical fitness. Instead of much of the cumbersome passive therapy apparatus of former years, the tendency is to use early active exercise without any apparatus, and later either active exercise apparatus of simple construction or various devices of the curative workshop principle, aiming to restore function as well as the individual's habit of work. All this leads to an increased tendency to combine physical therapy with occupational therapy under competent medical direction.

Concurrently with the development of newer methods of physical medicine and better understanding of the time-honored ones, certain trends became more and more pronounced in the therapeutic management of some of the conditions in which physical therapy plays an important role.

Chronic Arthritis

In the treatment of chronic arthritis and rheumatoid conditions, physical measures have found a steadily increasing appreciation, in direct ratio to the decline of faith in the wholesale removal of supposed foci of infection and in allegedly specific vaccines. The present generally followed plan of treatment of

chronic arthritis includes the combating of the known etiologic factors as well as the employment of all effective means for the restoration of function and relief of pain in the joints. It is universally agreed that physical measures have the unique capacity of influencing the general condition of arthritics as well as their local changes, if the latter are not too far advanced; the extent of stimulation as well as sedation by physical measures can be fairly well regulated individually and there is a large choice of time-proven as well as newer physical measures available. Most of these newer physical measures have already been enumerated; thermal measures, the paraffin bath for thickening of soft tissues in hands and feet, either form of diathermy for swelling of larger joints, under water exercises for joint stiffness; counter-irritant measures; mecholyl ion-transfer for stubborn cases of rheumatoid arthritis and neuritic conditions; histamine ion-transfer for rheumatic myositis; finally, the galvanic bath, either locally or generally applied.

Home Treatment of Arthritis

Increasing emphasis has been laid in recent years in the properly directed home treatment of chronic arthritis, because of its essentially chronic course and the grave economic problem often created by the length of treatment. In many cases of chronic arthritis, especially the early rheumatoid type, no matter how expertly done, diathermy or ion-transfer applied once or twice a week in a physician's office is not as effective as mild heat treatment applied daily or several times a day, followed by gentle massage and suitable exercise. Heat lamps, paraffin packs and whirlpool baths may be all employed in the home; members of the family may be instructed in a simple massage routine, in putting joints through the fullest possible range of motion and in carrying on suitable walking and postural exercises, provided that there is continuity of active medical supervision and interval treatment at the office.

Peripheral Vascular Disease

In peripheral vascular disease physical therapy has become an indispensable part of the general medical management. In prevalence of vascular spasm, such as in Raynaud's disease, ion-transfer with vasodilating drugs is being usefully applied; the same method has also been reported favorably in scleroderma and thrombophlebitic indurations. In organic occlusion the best known means for developing collateral circulation are controlled local heating and passive vas-

cular exercise. In early cases often complete functional recovery can be achieved, but even in the presence of ulcerations and gangrene physical therapy presents a fair chance to avoid amputations.

Peripheral Nerve Injuries

In the management of peripheral nerve injuries much recent study was devoted to determine the value of early, intensive stimulation of muscles by electricity. There are now several well supported newer experimental studies on record that such treatment is of definite value in conserving the function of muscles and in hastening recovery. In all cases of peripheral nerve injuries, whether suturing is done or not, physical therapy must be promptly initiated so that when the nerve regenerates it will activate a mechanism capable of adequate movement. In the various types of traumatic neuritis, including Bell's palsy, early and consistent use of physical measures, proper splinting, mild heating, and later suitable exercise have gradually become to be regarded as standard forms of treatment.

War Injuries and Rehabilitation

Treatment by physical agents is especially helpful in the care of injuries to muscles, joints and bones, after proper surgical treatment. A profound change has taken place in the rate of recovery in most injuries, since the former general method of immobilization for weeks and months has been altered. It is now fully recognized that the neglect of "soft tissue" damage is often the main cause of delayed recovery and subsequent discomfort. The early use of heat, massage, and exercise, combined with a minimum of necessary splinting usually gives immediate comfort and prevents adhesions between muscles, tendons and joints.

The large scale employment of physical therapy in the early treatment of war connected disabilities and in the rehabilitation program bears important implications for the future. The great number of physicians and personnel well trained in physical medicine and the host of injured benefited by its application will henceforth consider physical therapy as an essential part of medical treatment. We may, therefore, confidently expect that following the war, study, actual employment and further progress in physical medicine will be more extensive than even before. There can be no question of the advantages offered by properly employed physical measures in the treatment of many important conditions at the general practitioner's office, and also at his patient's bedside. Physical methods of treatment should enable the shortening of period of disability and suffering in many acute conditions by means that as a rule can be directly applied to the affected parts, and do not interfere with other indicated treatment measures. They are also of immeasurable help in treatment of many of the chronic conditions, greatly extending the personal service rendered by the physician, and effectively counteracting the inroads by poorly educated manipulative cults and other irregular practitioners.

Physical therapy, in the future, must be a constant part of every general practitioner's therapeutic resources. At the same time, specialists in various fields of medicine, such as surgery, orthopedics, gynecology, the nose and throat, and dermatology should all derive great satisfaction from such physical measures as are applicable to their respective fields, once they acquire theoretic grounding and at least the rudiments of clinical training in their employment.

2 East 88th Street

Coming Articles

The Treatment of Burns

Incarceration of the Retrodisplaced Pregnant Uterus
Notes From the Southern Medical Society Meeting 1944

The Growth of Infant Behavior

New Approach to the Problem of Function Indigestion: Treatment
Personal Experiences with Contact Lenses
Examination of the Eye (Pictorial Section)
Psychoneurosis in Peace and in War

When the Veteran Returns: Medical and Other Problems

By COLONEL JOHN N. ANDREWS

Officer in Charge of Postwar Activities, Selective Service System, Washington, D. C.

ONE of the greatest challenges the medical profession has ever faced will confront it in the readjustment program to be carried out following the war. This challenge will confront the physicians, surgeons, nurses, hygienists, psychiatrists, social workers, personnel directors, and others who are concerned with the re-integration of veterans. A similar task will be faced in the readjustment of the civilian population which has been dislocated as a result of the war.

The medical profession* has had wide experience with the men and women as they entered service and, through its more than 50,000 physicians and more than 20,000 dentists now in the armed forces, has met the medical needs of those requiring such services.

1,700,000 Veterans Already

The civilian physicians and dentists have had considerable experience with the more than 1,700,000 men and women who have been released from the armed forces. In addition, to these returned veterans the medical profession, with their ranks severely depleted, have provided medical services to the civilian population.

The number of men rejected for military service because of physical or mental defects is more than 4,500,000, according to Colonel Leonard G. Rowntree, Chief of the Medical Division, National Selective Service System. If we superimpose the discharges from the Army because of disability, the figure is well over 5,000,000.

The operations of Selective Service, covering over four and one-half years, and its war experience of more than three years, have provided ample evidence of the critical need for medical attention for the entire population. Furthermore, this experience has emphasized the need for coordinating and integrating the medical facilities of the nation in the interests of the entire population.^{1,2}

*As used in this article, medical profession includes dentists.

The task of readjusting the veterans at the end of this war will be at least three times as great as it was at the end of World War I, because there will be three times (or more) the number involved at the end of World War I. The men and women in the armed forces will have been away from their families, their jobs, school, and their friends much longer, and the 18 to 20,000,000 war workers to be readjusted will be far more numerous than in the last war.

Medical programs in factories and business organizations will need to be very closely integrated with the work of the personnel departments, and close contact should be maintained with supervisors, foremen, and others who are in intimate touch with the returned veterans.

Returning Physicians

Closely related to the medical problems will be the relocation and re-establishment of the 50,000 or more doctors who are now in the armed services. Some 20,000 of these physicians are young men who have never been in practice, and whose period of medical education and training was seriously curtailed by the exigencies of the war. These men must be given opportunity for further training, chiefly by means of residencies in hospitals and post-graduate study.³ Even in the case of many physicians who had practiced medicine for several years prior to their entry into service, there will need to be various types of refresher courses established where the physicians can be quickly indoctrinated regarding the new developments in medicine. Such courses and such experience will be especially important to those of the medical profession who have been performing administrative functions.⁴

Psychologically, the war will have made a great difference in the fighting man who is returning home. The young doctors now serving in the armed forces should recognize this fact and appreciate the opportunity to learn and understand the psychology of the servicemen. This knowledge in the years to come will be

extremely helpful in administering medical care to these veterans who will expect adequate medical and hospital care for their dependents, as well as for themselves.

When the present global war ends, the men and women who have been in service will have a number of opportunities. Some will want to remain in service. Large groups of the younger men and women will desire to resume their education and training. Thousands of the ex-servicemen will return to their old jobs, while many others will seek new employment. Some veterans will want to engage in farming and business, and others will be interested in the professions.

A very large number of the ex-servicemen and women will need hospitalization and rehabilitation before they can return to gainful employment.

The most critical group requiring readjustment will be the 3,000,000 or more men and women in the younger age groups who never had permanent positions.⁵

Hospitalization and Rehabilitation

It is estimated that ultimately a total of 300,000 beds of all types will be required for the hospitalization of veterans. It is believed that the peak load among tuberculosis cases will be attained during the next four or five years, but it is not expected that the peak load among the neuropsychiatric, general medical and surgical, and domiciliary cases will result until approximately 1975.⁶

Of the total 300,000 beds ultimately to be required, 100,000 of them will be available when construction already in existence or authorized is completed; 100,000, it is expected, will be secured by transfer of facilities of the Army and Navy, and the remaining 100,000 will be provided in the course of a long-range construction program.

"Rehabilitation may be defined as restoration to a state of robust health after injury or illness. It thus connotes the restoration of free movement to stiffened limbs, of vigor to tired minds, of courage and confidence to quailing spirits: in short—the physical, mental and ethical toning-up of the whole individual being. Obviously necessary physically for most persons before resuming work after even a week in bed, it is less obviously—but perhaps more urgently—necessary psychologically. The former need has long been recognized, the latter has for too long been neglected and hence its history is brief."⁷

The several branches of the armed forces have developed special rehabilitation programs, the general purpose and plans being approximately the same, but differing in details. Space allows a brief description of only one of the programs:

The Army Air Corps has developed three Redistribution Stations (Atlantic City, New Jersey; Miami, Florida; Santa Monica, California). These stations serve primarily as reclassification centers for the officers and enlisted men who have returned from extensive overseas operations; following short furloughs or leaves in order to visit their families, they report to one of the Redistribution Stations where they have a thorough physical examination, are given an opportunity for intensive interviews and they also have additional time for recuperation and recovery from arduous assignments if necessary.

Following the reclassification and interviews, some of the men are sent to rest or convalescent centers for further recuperation; those found to be in good physical and mental condition are given assignments commensurate with their physical abilities. Many of them ask to be returned for overseas operations as early as possible, while some of them suggest that they would like to have a different type of assignment, at least temporarily. Colonel Howard A. Rusk, Chief of the Convalescents Training Program, Office of the Air Surgeon, has been largely responsible for the development of this unique program and describes it in part, as follows:

"The Convalescent Training Program is designed for the ordinary sick soldier in our station hospitals. Physical reconditioning is accomplished by a systematic, graduated series of calisthenics and corrective exercises. These are first given in their mildest form even to bed patients. The exertion is gradually increased to a full organized period of close-order drill, outdoor games, recreation and ward fatigue. Exercises begin in bed two days post-operatively, to prevent muscles from becoming flabby. A pneumonia patient will begin deep breathing and hand, arm and chest exercises as soon as his temperature is normal. This simple, early, exercise routine improves the muscle tone of the patient and is an excellent morale factor. It continues him as part of the group.

"Conditioning camps have been established under medical supervision, in some of our basic training centers, to strengthen recently inducted, under-par

soldiers, unable to keep up with the regular program, and ambulatory patients requiring a long period of convalescence. These conditioning camps function in the same manner as a spring training camp for a baseball team."⁸

Education and Training of Veterans

Many veterans will want to return to school. If large numbers can be induced to continue their education and training, at least two important outcomes will result: First, the veterans will be given vital additional education which was interrupted by the war and; Second, this number of potential workers will be withdrawn temporarily from the labor market. The leaders in education will be confronted with the most challenging demand in their history.

Present indications are that a considerable number of professional men and women, including teachers, lawyers, engineers, doctors, and dentists will wish to pursue short courses, either on a part-time or full-time basis. Various professional societies and organizations are suggesting that appropriate instruction, forum discussions, and demonstrations be developed to meet the varied needs of such professional groups.

"G. I. Bill of Rights"

Two recent laws passed by Congress provide unusual educational opportunities for veterans. The Servicemen's Readjustment Act of 1944, popularly called the "G. I. Bill of Rights," is a well integrated plan for the few years immediately after discharge, and offers opportunity for each person released from war service under conditions other than dishonorable. *If a person served for ninety days, unless sooner discharged for disability, he is entitled to a refresher or retraining course for one year, without regard to his age when he entered service.* In order to be entitled to education beyond one year, he must show that his education or training was interrupted by the war. If he was less than 25 years of age when he entered service, it is presumed that his education was interrupted.

The educational training beyond one year may not exceed an additional three years and is determined on length of service and satisfactory progress in the course pursued. Surely this phase of the law will be of substantial and lasting benefit to returning veterans and will pay continuing dividends to the general welfare of the country well into the future.

Loans to Veterans

Another benefit of the law is the one which encourages veterans to purchase homes, farms or enter business. The Veterans Administration is *not* authorized to make loans, but is empowered to guarantee small loans which will aid in readjustment. The aggregate amount guaranteed in an individual case may not exceed \$2,000, and the interest on the amount guaranteed will be paid by the government for one year. The interest rate for the remaining period may not exceed 4 per cent per annum.

Regulations pertaining to the loans, permit the approval of funds to be used for the purchase of stock or equipment necessary to farming, or the materials and equipment necessary to engage in a business or profession. Thus a physician or dentist might use all or a part of the loan for the purchase of surgical or dental instruments, or for the office furnishings to be used in his practice.

Unemployment Allowances

A further bulwark against adversity is established by the provision for unemployment allowances of \$20 per week for not more than 52 weeks. These payments will be made by the Veterans Administration through the State Unemployment Compensation Agencies.

Disabled Veteran Training

The other important act, Public Law 16, extends the rehabilitation activities of the Veterans Administration to provide for a program to last for six years after the termination of the present war, during which period a veteran, man or woman, with a pensionable disability may receive training up to four years specifically aimed at the restoration of employability. *To be eligible for such training:* The veteran must have been in the active military or naval service at any time after September 16, 1940, and during the present war; must have a disability incurred in or aggravated by such service for which pension is payable under laws administered by the Veterans Administration, or would be but for the receipt of retirement pay; and must be in need of vocational rehabilitation to overcome the handicap caused by such service-connected disability.

The guidance process, previous to entrance upon a training program, takes into consideration his education, previous vocational training, present skills and aptitudes, and his interests and personal

desires, the object being adjustment of the individual in an occupation which will maximize his abilities and make minimal demands on his disability, which will be suited to him, and in which, when his training is completed, he will be at no disadvantage in competition with others. After an occupation objective is selected, training is carried out by existing educational agencies selected for the purpose.

The cost of this training is borne by the Veterans Administration. During the period of training, and for two months thereafter, the veteran, if single, receives a base pension of \$92 a month.

Retraining and Re-employment

Public Law 458, passed by the Seventy-Eighth Congress and approved October 3, 1944, established in the Office of War Mobilization, the Retraining and Re-employment Administration. The functions of the Administration, of which Brigadier General Frank T. Hines is the Administrator, are:

(1) To have general supervision and direction of the activities of all existing executive agencies (except the Veterans Administration and the Administrator of Veterans Affairs) authorized by law relating to retraining, re-employment, vocational education and vocational rehabilitation, for the purpose of coordinating such activities and eliminating overlapping functions of such agencies.

(2) To confer with existing State and local agencies and officials in charge of existing programs relating to retraining, re-employment, vocational education and vocational rehabilitation, for the purpose of coordinating the activities of existing Federal agencies with the activities of such State and local agencies.

After the veterans have completed various types of rehabilitation, education and training, they will return to their old jobs or seek new employment. The assistance of the Veterans' Employment Service of the United States Employment Service will be utilized by the Selective Service System in helping the veteran obtain a new position. In the return of the veterans to their old jobs, the Selective Service System will assume full responsibility.

Return to Former Position

Section 8 of the Selective Training and Service Act of 1940, as amended, provides that a veteran is entitled to reinstatement in his former position or in one of like seniority, status, and pay,

provided: (1) Such position was in the employ of a private employer, the United States Government, its territories or possessions, or the District of Columbia; (2) Such position was not a temporary one; (3) He left the position subsequent to May 1, 1940, to enter upon active military or naval service in the land or naval forces of the United States; (4) He satisfactorily completed his period of training and service and received a certificate to that effect; (5) He is still qualified to perform the duties of such position; (6) He makes application for re-employment within 90 days after he is relieved from service, or 90 days after he is relieved from a hospital following his discharge from service;⁹ and (7) If such position is in the employ of a private employer, the employer's circumstances have not so changed as to make it impossible or unreasonable to reinstate the veteran to such a position or to a position of like seniority, status, and pay.

The law goes further to protect the veteran after he has been restored to his job. When he returns to the payroll, it provides that: (1) He shall be considered as having been on furlough or leave of absence during his period of service; (2) He shall be restored without loss of seniority; (3) He shall be entitled to participate in insurance or other benefits offered by the employer pursuant to established rules and practices relating to employees on furlough or leave of absence in effect with the employer at the time such person entered military or naval service; and (4) He shall not be discharged from such position without cause for one year after restoration.

The industrial physicians and personnel directors can do much to facilitate the readjustment of veterans by a carefully integrated program that will make full use of data contained in the plant's medical records of the veterans, and by frequent interviews with the veterans.

Placing Disabled Veterans

The problem of placing disabled veterans will become increasingly important and serious as the war goes on. It is not too early to make preparations to meet this situation. Management today seems to be agreed that every possible effort should be made to utilize handicapped servicemen on jobs which they can perform successfully without danger to themselves or to fellow workers. They must be placed on jobs which they can do productively and with the greatest

financial return to themselves. This means that they must do "necessary jobs." Any attempt to make a job for a handicapped man will not work out satisfactorily for the man or for the company. This, of course, does not preclude the possible rearrangement of a job and a reasonable period of readjustment for the man himself.

When a handicapped man is placed successfully, he ceases to be handicapped from the standpoint of his productive ability and his earnings. There will be many employees released from the armed forces for physical reasons whose handicaps will in no way interfere with their return to their former jobs. There will be other cases of a more serious nature which will require rehabilitation before the veterans can be put to work.

Many industrial organizations have already made careful surveys to determine the various kinds of work to which men with physical handicaps can be adjusted. After handicapped veterans have been assigned to positions, it will be necessary for the medical division and the personnel department to follow up the cases to see that the handicapped veterans are placed in jobs which are in keeping with their abilities and with full regard to any physical or mental limitations which should be considered in their assignments to prevent injury to themselves or to their fellow-workers.¹⁰

The Psychoneurotics

There is one group about which there is serious misunderstanding. The difficulties of reintegrating the "mental" discharges or psychoneurotics have been greatly exaggerated. These cases generally showed no unusual emotional traits until they were subjected to the rigors of military training and discipline or to strenuous combat service. If wise procedures are followed, except in rare cases, such persons will make a complete and satisfactory readjustment to their jobs, their families and friends, and to the community of which they are a part. The medical profession can do much to help bring about a better understanding of these veterans which will help to facilitate their readjustment.

"Public education is especially desirable for the benefit of the neuropsychiatric veterans who are discharged. Many misconceptions exist in this field and will result in a different reception at home, a cold shoulder from former acquaintances, a misunderstanding among employers. Even men in high government positions are reputed as having

stated that they did not want to employ a 'psychoneurotic.' Such individuals need to be educated to the fact that the great majority of these men so discharged are not incapacitated. None are psychotic and very few are any less capable of holding jobs than before they went into the Army.¹¹

It is hoped and confidently expected that, through the combined efforts of the medical profession, educators, industrial and labor managers, business and professional leaders, plans can be made by which veterans can be satisfactorily readjusted. If these men and women are quickly and satisfactorily reabsorbed, they will become a great constructive force in every community.

REFERENCES

¹Colonel Leonard G. Rowntree in *Hearings before a Subcommittee of the Committee on Education and Labor, United States Senate, Seventy-eighth Congress, p. 1638.*

²Testimony of Dr. Ernst P. Boas in *Hearings before a subcommittee of the Committee on Education and Labor, United States Senate, 78th Congress, page 2059.*

³See abstract of Admiral McIntire's address as given in *Medical Annals of the District of Columbia, December, 1944, page 449.*

⁴Dr. John P. Peters: Quoted in *Medical Annals of the District of Columbia, December, 1944, page 441*, from an address given before the Sixteenth Annual Scientific Assembly of the Medical Society, October 7, 1944.

⁵John N. Andrews, "Readjustment of Veterans," *Industrial Medicine, June, 1944, pp. 472-478.*

⁶Contained in testimony of Brigadier General Frank T. Hines, Administrator of Veterans' Affairs, and Administrator of Retraining and Reemployment, Office of War Mobilization, as published in *Hearings before a subcommittee of the Committee on Education and Labor, United States Senate, 78th Congress, pp. 1713-1914.*

⁷Col. Stanley D. Large, in his report on the British System of Rehabilitation: Quoted in *Occupational Therapy and Rehabilitation, October, 1944, page 215.*

⁸Colonel Howard A. Rusk, Chief Convalescent Training Division, Office of the Air Surgeon, "The Army Air Forces' Convalescent-Rehabilitation Training Program," *The Journal of the Indiana State Medical Association, December, 1943.*

⁹Further amendment provides application for reinstatement may be made within ninety days following release from hospitalization provided such hospitalization follows immediately after separation from service and extends for period of not more than one year from date of separation.

¹⁰For a full discussion of this problem, see the recent panel discussion on "Putting the Disabled Veteran Back to Work" (Dr. C. D. Selby, Chairman), Industrial Hygiene Foundation, Pittsburgh, Pennsylvania.

¹¹Colonel William C. Menninger, Director of the Neuropsychiatric Division of the Office of the Surgeon General of the War Department.

Editorial

Doctors Who Were "Different"

Most of us are used to physicians who move about between home, office and hospital, who are standardized and routine in their actions. Yet a number of doctors have sandwiched in other exciting activities among their professional efforts. Quite by accident, I stumbled onto a group of true tales concerning physicians who were "different."

"*Doctor at Timberline*" by Charles Fox Gardiner, M.D.,¹ is the autobiography of a young eastern physician who located in the wilds of Colorado, made friends with the cowboys and ranchers of that earlier day, learned to ride and shoot as well as they did, and carried medical skill to a huge area, often at great risk because of climate, mountains or bullets.

He was a true frontier doctor, and reading of his adventures and difficulties will make our auto calls seem less tiring. Those who wish to train a balky horse or a vicious dog will learn much from his description of the proper methods.

"*Gringo Doctor*"² starts off slowly with minor tales of practice in Texas by Dr. Bush (who is still practicing in El Paso, by the way), then livens with tales of camping and hunting in Mexico. His stories of war below the Rio Grande, raids by guerrillas, surgical experiences with the insurrectionist troops as their surgeon, meetings with Madero and Pancho Villa, daring trips over the border, descriptions of Indian customs and relics, make good reading.

He is at his best in describing hunting trips and the rapid movement of troops during the civil war in Mexico.

"*Dog Team Doctor, The Story of Dr. Romig*,"³ biographically relates many stories of Alaskan life by the physician who was a "wizard with the dog team." He was a courageous man who never considered the odds involved in traveling to someone who was sick.

Many bits of humor enliven his story. Dr. Romig was once asked what the three vitamins in Eskimo food were.

"I suppose it all depends upon the way you look at it. I've always heard they were vitamins R, S and T — for rotten, smelly and tough."

Eskimo traditions are interestingly recounted. For example, these tribes paid little attention to babies until it was sure that they were going to live. The Eskimo mother never cried out in childbirth as she was taught that an outcry will make the pain worse (at times, she did bite on a piece of wood). She usually squatted on one foot for delivery.

"*Marcus Whitman, M.D.*"⁴ is a medical pioneer known to fame, as a physician, farmer and missionary in the old Northwest. The author feels that Whitman has long been given an idealistic rank in Northwest history that he did not deserve. Whitman and his lovely wife were tragic misfits in a land of brutal realities, and their lives were more tragic than triumphant.

The book is well documented and indexed. It relates the hardships of life on the old frontier and among the Indians of the Northwest, who treacherously killed both Dr. Whitman and his wife.

"*An Old Doctor of the New School*"⁵ is an autobiography that is difficult to classify. It is the story of a homeopathic physician who studied and taught and wrote on medical subjects, eventually becoming a competent surgeon.

Those purists who wish everyone to receive medical care may be interested in a statement, "In the Middle West, I think that as a rule, surgical fees are not exorbitant. Personally the largest fee ever received by me was five thousand dollars and that was more an honorarium than a fee. I have received a good many one thousand dollar fees and a much larger number of five hundred dollar fees. But my usual fee for patients only fairly well to do ranged from one hundred to three hundred dollars in-

¹ Gardiner, Charles Fox: *Doctor at Timberline*.

² Bush, I. J.: *Gringo Doctor*.

³ Anderson, Eva Greenslit: *Dog Team Doctor, The Story of Joseph Herman Romig, M.D., F.A.C.S.*

⁴ Drury, Clifford Merrill: *Marcus Whitman, M.D., Pioneer and Martyr*.

⁵ Wood, Dr. James C.: *An Old Doctor of the New School*.

The above books are from the presses of the Caxton Printers, Caldwell, Idaho.

cluding my personal care during the patient's hospitalization."

"I am not so sure that the life of a Wall Street magnate is any more valuable than the father or mother of a family of several small children living in a street or even in the slums."

A large section of the book is devoted to the author's medical views. He felt that, in some cases, he had cured epileptics by pelvic operative procedures. He speaks at length of the value of homeopathic medications, and states that modern investigations have shown their value.

Many of the medical and surgical leaders of the day are mentioned, described and interesting incidents described.

♦

Beware so long as you live, of judging men by their outward appearance.—*La Fontaine*.

♦

Artificial Pneumothorax for Tuberculosis

There are many facts that are not known by the average clinician about the artificial pneumothorax treatment of pulmonary tuberculosis.

Rafferty¹ writes that:

1. The use of pneumothorax therapy, without dividing the adhesions that prevent the lung from collapsing (closed intra-pleural pneumonolysis), means that many patients will not be benefited.

2. Every patient receiving air injections into the chest cavity has a resultant pleural thickening and consequent improbability of the affected lung ever regaining fully normal expansion. Add to this the irritating effect of pleural fluid, which develops in 4 out of 5 patients with pneumothorax, and it is evident that the lung will rarely regain full normal size.

3. If to the above factors is added, a very marked collapse of the lung by large air injections (over 500 cc. at one time), serious future complications will follow. The lung should rarely be collapsed to less than one-third of its original size.

4. Frequent, small injections are thus more effective in treatment than large injections at longer intervals.

5. One should keep in mind that the affected lung should be "relaxed" in stead of compressed. The usual negative pressure in the pleural cavity should be decreased but air should never be pumped in under pressure.

¹ Rafferty, T. N.: Artificial Pneumothorax in Pulmonary Tuberculosis. Grune and Stratton, New York.

Cancer vs. Colitis

"The diarrhea of cancer, with evacuation of mucus, pus and occasionally blood, is commonly attributed to a colitis. An early morning diarrhea is an indication of cancer of the pelvic colon. Diarrhea from an abdominal growth may alternate with periods of constipation." W. Wayne Babcock in *Pennsylvania Medical Journal*, Aug. 1943.

The diagnosis of colitis should be made with caution in the temperate zone. In one family, I remember that the diagnosis of colitis had been made in both the father, who died of carcinoma of the splenic flexure of the colon, and in the 12 year old niece, who almost died of perforative appendicitis.

Certainly no diagnosis of colitis should ever be made without examining the rectum, and, if symptoms persist, more than a short time, sigmoidoscopic examination followed by barium enema x-ray studies. I do not refer to the frequent gastroenteritis with vomiting which lasts for a day or two, and which is usually checked promptly by morphine orally or hypodermically.

The diagnosis of spastic colitis, or rather spastic colon, implies nervous tension or anxiety on the part of the patient, who needs psychosomatic study (see Weiss' "*Psychosomatic Medicine*," published by Saunders) rather than sedatives and antispasmodics.

♦

Educating Your Patient: Smoking

For the patient who wishes to know if he should smoke, for the pregnant woman who "can't get along without her cigaret," for the high school and college student who are just taking up smoking, even for the physician who smokes, Steinhaus has written a leaflet "Shall I Become A Smoker?"*

He compares scientific advice to a road map. The road map does not care whether you go to New York or San Francisco; science does not care whether you smoke or not. Both give you information you need to know in making up your mind.

This is modern language at its best, from a standpoint of good writing as well as a very brief scientific explanation of what smoking does to the body.

*Arthur Steinhaus, Professor of Physiology, George Williams College, Chicago, Illinois. Published by the National Education Association, 1201 Sixteenth Street, Northwest, Washington, D. C. 12 leaflets for 25 cents (non-profit basis).



GRADUATE COURSE

Tropical Diseases You Should Know

A Symposium

Physicians all over the country are concerned about tropical diseases that may be brought home by returning troops and civilians.

From what I could gather, so-called tropical diseases depend primarily on parasites and insects for their spread. Good public health work is, therefore, the first line of defense.

Many tropical diseases have been present in the U. S. previously but have died out or have been eliminated by sanitation, quarantine and other public health measures.

Clinical Medicine has written to many authorities on this important subject. Their views will be presented, from time to time, as a continuous graduate course, to help you in diagnosing and treating these diseases. We must be especially careful when treating veterans from Africa, Italy or the Pacific.

Discussion

By AN ARMY PHYSICIAN

A. A. F. Hospitals, Santa Ana, Calif.

U. S. Public Health Service

Question 1: "What diseases may be newly transported to the United States?"

Answer: Malaria, of course, is a disease of which we are seeing the greatest number of cases. We may anticipate that we will see *leishmaniasis*, *trypanosomiasis*, and various other diseases in lesser numbers. I would guess that malaria will be our greatest problem, both during and after the war. Since tropical diseases are often the result of poor sanitation and poor hygiene, complicated by unhealthy living conditions, the work of the Sanitary Corps of the Army and Navy, both of this country and Great Britain, should keep such diseases at a minimum. *Dengue fever* occurs frequently in the tropics but is a short, self-limited disease and should not concern us in the continental United

States. What may be of interest, and certainly amazing to many practitioners in this country, is the fact that *many men returning from overseas have tuberculosis*. How many of these cases went overseas with incipient tuberculosis, and how many of them actually became infected overseas is a moot question. Certainly, the orient and the tropics are riddled with tuberculosis.

Question 2: "Will the more virulent forms of diseases already present in the United States, notably malaria, appear more commonly?"

Answer: In our experience, the majority of cases of malaria have been uncomplicated tertian malaria. We have had only one or two cases of malignant malaria in the past several years. We do see individual cases of tertian malaria manifesting acute gastro-intestinal reactions, or cerebral symptoms. However, the majority of cases have been rather benign, tertian malaria; and, in our experience in Santa Ana, I can see no reason to suspect more malignant malaria in this country after the war.

Question 3: "How may they diagnose tropical diseases in returning service men and civilians?"

Answer: Of course, the first step in the diagnosis of these diseases is the awareness that they exist and that they may be present in people in this country. General practitioners and specialists, wherever they may be located in the United States, must formulate in their minds an outline of the more common tropical diseases, especially those which may be anticipated here in the continental United States; these diseases must be included in the mental differential diagnosis of all cases presenting symptoms which may represent any one of the tropical diseases.

Undiagnosed Fever: Fever of unexplained origin, which brings to mind

tuberculosis, undulant fever and related infections, must now also bring to mind the possibility of malaria, leishmaniasis, and any one of the diseases which are indigenous to the tropics. The use of thick and thin blood smears for the finding of malaria parasites, the use of the splenic puncture and the sternal puncture for the finding of the organisms producing leishmaniasis, trypanosomiasis and filariasis must be learned by a larger number of men than now use them.

A good, and brief outline of the tropical medicine is the book by Geiger and Read of San Francisco. This is a pocket manual affair, but has a complete and up to date outline of the essentials of tropical medicine. Laboratories in all parts of the United States must broaden the scope of their work so that they can effectively study excretions and secretions and materials obtained from human bodies for tropical diseases. I think that the responsibilities for the diagnosis of many of these diseases rests with the laboratory because the diagnosis so often depends on the exhibition in the body fluids or body contents of certain organisms or inclusion bodies.

Discussion

By DR. R. E. DYER

U. S. Public Health Service

The relative importance of various tropical diseases in civilian practice after the war will depend considerably on the areas in which our troops engage in future combat operations. Since the Far Eastern theatre will provide exposure to a considerable number of exotic diseases, we may look to this theatre for the conditions which may possibly be of importance in the future.

With the above in mind, it is our opinion that *amebiasis*, *schistosomiasis*, and *leishmaniasis* possibly rank in importance, after *malaria* and *filariasis*. Exposure to *amebiasis* in the theatre in question will no doubt be considerable and there is some evidence to indicate that strains of *Endameba histolytica* in this area are particularly virulent. *Schistosomiasis* is endemic on the Islands of Leyte, Samar, and Mindoro. While we are now conducting military operations only on the fringe of the endemic areas of this disease, there is no doubt that future operations will be extended into the more heavily infected zones. While there has been little opportunity for exposure to leishmaniasis, it may be expected that cases will develop

if future military operations take us into the mainland of China. All of the above-mentioned conditions show a decided chronicity and are not always easily diagnosed or successfully treated.

Discussion

By DR. LOUIS L. WILLIAMS, JR.

U. S. Public Health Service

The expected increase of cases of tropical diseases in the United States, as a result of the war and of increased air travel, poses a serious clinical problem. The general practitioner has very little knowledge of the diagnosis and treatment of tropical diseases, and there are very few laboratories in this country acquainted with the exotic parasites or the methods for their discovery and identification. Of the two needs, the most urgent is the education of laboratory personnel.

The diseases of primary interest and on which we should concentrate attention are:

1. Malaria.
2. Amebiasis.
3. Ancylostomiasis.
4. Filariases.
5. Leishmaniasis.
6. Schistosomiasis.
7. Echinococcosis.

A program for stimulating more thorough teaching of tropical diseases in the medical schools cannot be developed until there has been opportunity to analyze the present situation with the deans of medical schools and other interested groups. It is believed that the contemplated program will cost approximately \$225,000 a year. Steps have been taken to secure such an allotment.

Information Service to General Practitioners: Stimulation of the practitioner's awareness of the problem of tropical diseases and bringing them information on diagnostic points and therapy can be accomplished by a team of itinerant full-time lecturers. Their contact with local physicians should be through state health departments and state and local medical societies. For this group, we must collect visual teaching material for lecture purposes, and must prepare brief monographs on the diseases of principal interest for distribution to practitioners. In view of the dearth of available medical men, it is felt that parasitologists can be used effectively. They can be given supplemental training at an appropriate institution.

Lectures to medical groups should follow, not precede, laboratory training for

an essential feature of them is to acquaint physicians of the location of diagnostic services. Pending the appropriate time for the employment of such teams, the funds so allotted could finance the employment of temporary teams to be recruited from the staffs of universities or research institutions. These temporary teams could most appropriately be the original or ground-breaking groups to commence the orientation of state health department laboratories and could later give some of the medical society lectures. This procedure should be carried out during the time necessarily consumed in recruiting and re-training the permanent technicians who are to follow them.

Teaching and demonstration material is essential. Some can be secured from the Public Health Service and probably some from the Army's Medical Center. These sources can hardly produce all the material needed. To secure the balance it may be necessary to send an individual out of the country to collect and ship a steady flow of specimens. As an alternative we might give small grants-in-aid to existing institutions to finance such collections.

Teaching Laboratory Methods: Small teaching teams should visit state health department laboratories to give brief courses on and demonstrations of the technique of identification of the principal tropical parasites.

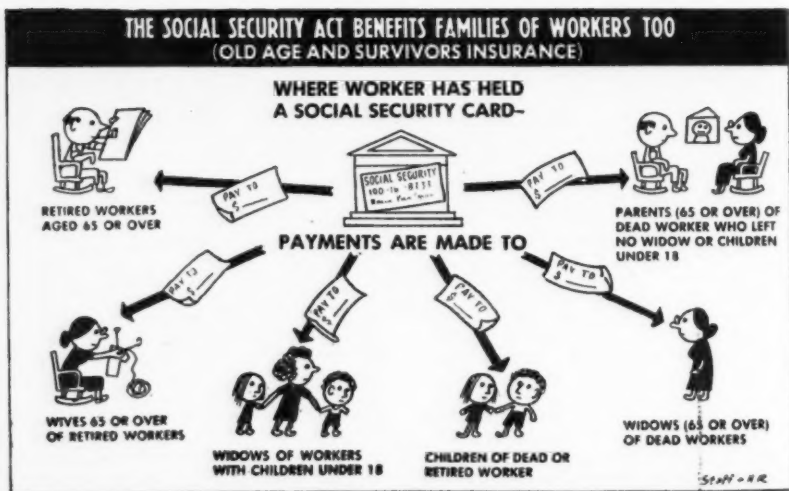
Thereafter a technician specifically trained in the identification of the para-

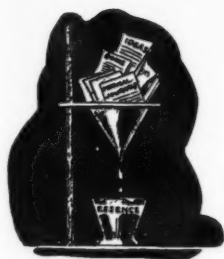
sites of tropical diseases should be resident for one or two years at each state health department laboratory to continue the training of its personnel. This technician is then available to organize classes for technicians from hospital and private laboratories within the state and to visit the larger laboratories.

Technicians: Approximately 50 technicians will be needed with special training in the discovery and identification of the parasites of the principal tropical diseases. It appears that this number cannot be found in the civil population. It may be possible to recruit them from demobilized military personnel.

Both services have trained a relatively large number of laboratory technicians during the 3 years past, a great many of whom have gone overseas. A number of these have become battle casualties and are now undergoing physical rehabilitation. Steps are being taken to find these individuals and ascertain the degree of training of each. It is believed supplementary training can be given through the Veterans Bureau in a number of cases. In others it may be necessary to appoint them in the Public Health Service, possibly on fellowships, and assign them to special courses to be arranged for.

This source of recruitment not only offers a ready method of filling our need quickly, but also fits in with the over-all plan for veteran replacement in civil life, especially the wounded veteran.





CLINICAL NOTES and ABSTRACTS

Meningococcic Infection

1. It is possible to diagnose early meningococcic infection with reasonable accuracy in a high proportion of cases by clinical means alone.

2. The four cardinal signs and symptoms are *headache, vomiting, chill and rash*.

3. Early treatment is of the utmost importance. It should be begun without waiting for bacteriologic diagnosis.

4. Of 62 cases in which spinal puncture was done, the spinal fluid was clear in 31. Organisms were frequently recovered from clear fluids.

5. One-fourth of patients had meningococcemia only, with no meningitis.

6. Positive blood cultures were obtained in $\frac{2}{3}$ of cases.

7. In 11 undoubted cases, the organism could not be recovered either from the blood or from the spinal fluid.

8. Intravenous treatment with sulfadiazine as a routine is recommended for the first twenty-four hours.

Treatment: In no disease is prompt, energetic treatment more necessary. The aim should be to establish diagnosis and start treatment before meningitis has developed. This is possible in many cases. Without treatment, progression from a beginning septicemia, which in some cases produces so few symptoms that it can be easily overlooked, to a purulent meningitis with coma may be very rapid. With vigorous treatment before the meningococcus has invaded the meninges, or at the beginning of invasion, in ordinary cases there is rapid and spectacular cure. For these reasons it is a mistake to withhold treatment until a definite bacteriologic diagnosis has been made; if the clinical signs are those of early meningococcic infection

(headache, vomiting, rash) treatment should be begun at once.

This schedule embodies our routine procedure:

1. Lumbar puncture, requesting white blood cell count, differential, smear, culture, sugar and globulin.

2. Blood culture, white blood cell count, differential.

3. Diagnosis of meningitis on finding of cloudy fluid or positive smear or both.

4. If patient appears clinically to have meningitis or meningococcic septicemia, start on intravenous therapy regardless of appearance of spinal fluid or laboratory reports. This should be done immediately after spinal tap and blood culture are done.

5. Treatment (this routine should be adhered to in detail): Sodium sulfadiazine 5 Gm. in 100 cc. of distilled water intravenously (2 ampules of each) followed by 1,000 cc. of 5 percent dextrose in isotonic solution of sodium chloride. Eight hours later give 2.5 Gm. of sodium sulfadiazine intravenously and follow with 1,000 cc. of 5 per cent dextrose in isotonic solution of sodium chloride. Repeat eight hours later. In cases of stupor or in presence of nausea or vomiting, intravenous therapy to be continued every eight hours in the same manner. If condition is satisfactory, to be given eight hours after last intravenous dose, 1.5 Gm. by mouth and repeated every four hours. Then changed to 1.5 Gm. every six hours two days after temperature recedes.

6. If patient shows evidence of circulatory shock or failure, give 1,500 cc. of 5 per cent dextrose in isotonic solution of sodium chloride intravenously and 2 cc. of adrenal cortex extract by hypo-

dermic as often as may be required and treat for shock. When pulse and blood pressure respond and stabilize, discontinue. Sodium chloride $\frac{1}{8}$ teaspoon by mouth every four hours to be given in conjunction with foregoing treatment. Blood pressure taken every three hours.

7. Orders: Daily sulfonamide levels; daily urinalysis; Intake 3,000 cc. or better (sulfadiazine; 1,500 cc. (sulfanilamide); blood pressure daily for three days; intake and output chart. In cases showing mild periodic temperature elevations during convalescence, a blood culture is to be taken three days after discontinuing sulfonamide drug and patient is to be held in ward until read three days later. Throat cultures to be taken on fifth day after admission and every third day until two negative cultures have been obtained.

8. Serum: To be used only in following conditions:

- (1) fulminating cases in conjunction with sulfonamide drugs;
- (2) intolerance to all sulfonamide drugs.

SULFONAMIDE DRUGS: Good results have been reported with all four sulfonamides. Sulfadiazine was used in all our cases and at the moment it seems to be the drug of choice.

METHOD OF ADMINISTRATION: It is commonly advised that oral administration be used as a routine, and intravenous only for those who are in coma or who cannot retain the drug by mouth. We do not agree with this and have treated all patients intravenously for the first twenty-four hours, with the exception of a few very mild cases of subacute or chronic meningococcemia. There are two reasons for this: 1. Most patients, while not vomiting continuously, will vomit occasionally and in this way lose one or two valuable doses in the first twenty-four hours, just at the time when they are in most need of the drug. Particularly in dealing with large numbers of patients it is very desirable to know that in the early stages each one has received into his blood stream a large amount of the drug and that there is no guesswork about it.

2. When sulfadiazine is absorbed quickly by the intravenous method of administration, a high blood concentration is reached at once in all instances irrespective of individual variations in absorption. It has been said that sulfadiazine is so rapidly excreted that a more constant level is maintained by oral than

by intravenous administration. This may to a certain extent be true but is unimportant from a practical point of view if the intervals between intravenous doses are not too long. A twelve hour interval is commonly recommended. We thought this interval too long and felt that if it was used the blood concentration before the next dose would be too low. Therefore an eight hour interval as routine was adopted.—L. W. HILL, M.D., in *Jour. A.M.A.*, Sept. 4, 1943.

Procaine—The Safe Spinal Anesthetic

The difficulties sometimes encountered in obtaining a satisfactory level of anesthesia are all of a technical nature and are usually eliminated with practice. The difficulties most frequently met are: (1) dry puncture, (2) bloody fluid, (3) lancinating pain down the leg of the patient, and (4) successful puncture and injection but no anesthesia at the desired level.

The dry puncture is the result of not entering the subdural space. The bloody puncture results from puncturing a small vessel. The pain down the leg of the patient means that the needle has deviated from the midline. The satisfactory puncture and injection with no anesthesia is probably due to an accumulation of the fluid posterior to the sac caused by the dura and arachnoid being pushed forward by the stream of injected fluid. Leakage from the puncture site is another possible explanation for lack of anesthesia.

The advantages of spinal anesthesia are rapid quiet induction; freedom from irritation of the respiratory tract; complete relaxation; maintenance of consciousness; and the small amount of drugs used to induce anesthesia. A further advantage in war time is the small amount of space required for storage of the necessary equipment and drugs for many anesthetics. — J. E. CAMERON, quoted in *Spinal Anesthesia News*, Sept., 1943.

The Fluorescein Test for Viability in Surgery

One problem in surgery is to determine the viability, the circulation of an organ or tissue. When operating on a patient with strangulated hernia, one wonders if the compressed bowel will have a normal circulation. When transplanting a pedicle skin graft, one wonders if there is sufficient circulation so that the parent end can be cut.

K. Lange and J. Boyd described a technic by which sodium fluorescein was injected intravenously and the part in question observed under ultraviolet light. J. Dingwall and J. Lord recently studied the use of this method, both experimentally and clinically, on the management of tubed (pedicle) flaps. Ten cc. of a 20 percent sodium fluorescein solution is injected intravenously, following which all skin with sufficient circulation becomes a bright yellow-green as contrasted to purple non-viable, so that one can determine whether blood is circulating, and its relative amount. A rubber-shod stomach clamp is placed on the "old" end of the graft to see if blood was coming from the transferred end.

Gangrene and slough did not occur in any case in which the fluorescein test showed the graft to receive blood from the newly established end.

Other uses suggest themselves, such as *injuries with almost complete separation of a skin flap or finger stump*, healing of wounds or infections, studying circulatory changes in a healing skin graft, *the circulation of an arm or leg in a diabetic patient or one with peripheral vascular disease*—R.L.G.

Industrial Diseases: Protecting the Worker

Most industrial diseases are caused by gases, vapors or fumes which have poisonous properties. Many are not ordinarily poisonous but cause trouble due to the conditions under which they are used or by the way they gain access to the body. Thus sand, under certain conditions, may cause irreparable damage to the lungs (silicosis).

Dusts consist of large numbers of particles from $\frac{1}{2}$ micron to 150 microns in diameter, so finely divided they may be carried by air currents. The smallest the unaided eye can see is 60 microns.

Harmless dusts contain no appreciable amount of silica or poisonous materials, such as limestone. Heavy concentrations may mechanically irritate the nose and throat causing swelling of the mucosa and favor bacterial growth. Blocking of the sinus and Eustachian tube openings may result in sinusitis or otitis media, but heavy concentrations are required. Prevention: Use of respirators will give adequate protection.

Definitely poisonous dusts: Lead is one of the commonest, most poisonous industrial dusts. It may be swallowed, in-

haled or absorbed through the skin (tetra-ethyl lead). Ingestion usually results from unclean eating habits or from eating lead containing foods (rare). Inhalation is the chief form of entry. Lead is partly excreted in urine and feces (tests will show its presence and thus make the diagnosis) but part is stored cumulatively in the body, causing symptoms of lead poisoning. The worker is not aware that he is breathing in lead, as there is no irritation of the lungs.—*Canadian Nurse*, Apr., 1944.

Median Episiotomy

The safest, most satisfactory episiotomy is that made in the midline directly toward the rectum. Repair is effected with greater ease, healing is more rapid, discomfort on movement is decreased.

Objection: The danger of extension of the episiotomy into the rectum. This is avoided by incising the vaginal mucosa 2 cm. (almost one inch) further than the perineal skin incision, third degree tears into the rectum are avoided. The episiotomy must be performed before the head bulges out the perineum.

Anesthesia: A 10 cc. syringe, a 24 gauge needle two or three inches in length and one percent procaine in normal saline solution make up the equipment (plus a few whiffs of ether).

The perineum and underlying tissues along the midline are infiltrated with 10 cc. of procaine solution. A pair of blunt nose scissors is used. The episiotomy is carried down the midline to, but not including, the sphincter ani. Care is taken to be sure that the vaginal mucosal incision is made longer than that of the perineal skin, this step being the feature which we have found to prevent third degree lacerations.

Repair: Immediately after delivery, 000 catgut (fine) is used on fine, round needles to approximate identical layers of tissue.—W. K. CHANG, M.D., in *West. J. Surg.*, Nov., 1943.

Stilbestrol in Obstetrics

Stilbestrol, in cases of nausea occurring during pregnancy, has been given by the writer in 5 mg. doses at 9 p.m. every night until the nausea ceases. This symptom is regarded as being due to the rising or changing estrogenic content of the blood. By giving stilbestrol, the content of estrogen can be maintained and in this way the patient's nausea is relieved.—A. P. HUDGINS, M.D., in *Med. World*, (Lond.) May 5, 1944.

Surgical Problems During Pregnancy

Pregnant women tolerate even major surgical procedures fully as well as the non-pregnant. When the surgical disease becomes complicated by peritonitis, the outlook is unfavorable, and the maternal and fetal mortality is high. Ovarian tumors complicating pregnancy may be removed with relative impunity, provided operation can be postponed until the first 3 months are passed. Myomectomy should not be performed during pregnancy except on urgent indications. An exploratory laparotomy for suspected ectopic pregnancy (why not use peritoneoscopy?—Ed.) can be performed with relatively little danger of miscarriage if a normal intra-uterine pregnancy be found.—C. G. CHILD, M.D. in *Am. J. Ob. & Gyn.*, May 1944.

Intrauterine Soap Paste

The intra-uterine injection of soap pastes, as an abortifacient, first introduced into this country from Germany some 10 years ago, has resulted in a number of deaths due to absorption of the potassium and lethal amounts of potassium entering the blood stream. In several cases, the deaths were due to actual necrosis of the uterine wall, hemorrhage, septicemia, hemolysis and peritonitis.—R. W. WEILERSTIN, M.D., in *J.A.M.A.*, May 20, 1944.

Succinylsulfathiazole for Neonatal Diarrhea

Epidemic neonatal diarrhea is most frequent in babies under one month old, those weighing less than 7 lbs. showing the highest mortality rate. In those with sudden onset, there are frequent watery greenish yellow stools, vomiting and fever. Weight loss may be alarming and dehydration may be severe within a few hours. Fluid replacement, blood transfusions, change of feeding formula or addition of pectin agar do not materially alter the course of the disease.

A milder type of the disease with the above symptoms milder or some of them absent has been described. These cases usually recover in a week or ten days.

Succinylsulfathiazole (Sulfasuxidine): Routine oral dosage of the drug is 0.25 gm. per kilo of body weight, repeated in 24 hours.

In our series we used the following routine: 1. Succinylsulfathiazole by mouth; 2. opiates by mouth; 3. vitamin K; 4. plasma or whole blood transfu-

sions; 5. parenteral fluids; and 6. protein milk formulas.

The extreme fluid and electrolyte loss was combated with isotonic solution of sodium chloride, distilled water and dextrose, plasma or whole blood. Whole blood had a short lived effect and subcutaneous fluids were only a moderate aid.

Vitamin K is important since the reduction of the coliform flora inhibits the absorption of the vitamin and hence promotes bleeding tendencies.

Dosage of the succinylsulfathiazole was an initial 2 grains per pound of body weight, followed by one sixth the initial dose every four hours.

Withdrawal of the drug was based on: 1. number, color and consistency of stools; 2. weight gain; and 3. general physical state of the infant.

Infants treated by succinylsulfathiazole had an average weight gain in 8 days more than those not so treated had in 17 days.

There was a rapid reduction in the number of stools in 24 hours in those infants receiving the drug in contrast to a very gradual reduction in the untreated ones.—A. H. TWYMAN, M.D., in *J. Amer. Med. Assn.*, Sept. 18, 1943.

Collapse Therapy in Bilateral Pulmonary Tuberculosis

Bilateral collapse therapy in carefully selected cases of advanced bilateral pulmonary tuberculosis is safe and effective, and is the only hope of arresting the disease in most instances. Intrapleural pneumothorax, including pneumolysis where indicated, is treatment of choice; if this fails, thoracoplasty or extrapleural pneumothorax should be considered. Oleothorax has not been very successful. Phrenic nerve surgery is indicated for basal lesions.—J.B. ANDOSCA, M.D., in *Dis. of Chest*, Mar.-Apr. 1944.

Ringworm of Feet

In the macerated type of ringworm of the feet, daily coating of the parts with pure coal tar, and rubbing once weekly with 70% alcohol, brings excellent results in nearly every case in about 4 weeks. No washing with soap and water is permitted during treatment. On eczematous areas of the feet a mixture of equal parts bezole and salicylic acid ointment with White's coal tar ointment (crude coal tar, zinc oxide, and petrolatum) is useful.—V. PARDO-CASTELLO, M.D. in *Arch. Dermat. Syphilol.*, Mar. 1944.

Treatment of Angina Pectoris and Coronary Disease

1. The injection of atropine sulphate definitely reduces the mortality rate in coronary thrombosis (N. C. Gilbert).

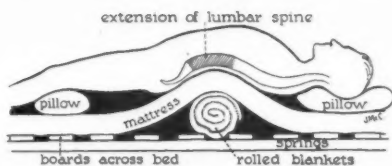
2. *Anginal pains may be caused by disease of the gallbladder (spasm) which is relieved by theophylline and nitrites, thus making it appear that the pain originated in the heart itself. Anginal pain is not diagnostic of a heart lesion.* Spasm of the esophagus or cardiac end of the stomach may also cause such pain. If gallbladder disease is present, its removal will relieve the patients of such anginal pain.

3. Powerful emotion also leads to visceral spasm and afferent impulses leading to reflex constriction of the coronary vessels.—A. L. TATUM, M.D., in *Wis. M. J.*, Sept., 1943.

(This work explains the clinical fact that patients with gallbladder inflammation and anginal pains are frequently relieved by cholecystectomy. One should insist on surgical cure of such patients who are invalidated by attacks of pain and abdominal distress. Often they have been told that they were in such poor health that surgery could not be undertaken. As a matter of fact, they stand surgery well and are in good health thereafter.—Ed.)

Volkmann's Contracture

Quite apart from the active block of the circulation by an embolus, injury to the vessel wall, or a contusion leaving no evidence of injury, may lead to a constriction of it over a considerable distance and even into its branches and collaterals sufficient to produce gangrene. That this is the mechanism of Volkmann's contracture has been ably proved by the observations of Griffith and Foisie. Here the deficient circulation as shown by the appearance of ischaemia and the absence of the radial pulse, leads to a necrosis of the muscles of the forearm. A sympathetic block at the stellate ganglion may be effective but more often it is not, and it is necessary to expose the brachial artery promptly. This will usually show a constricted cordlike vessel and the resection of it serves to interrupt the constrictor reflex at the low level and releases the collateral circulation. This syndrome occurs most frequently following supracondylar fracture but may follow injuries of any kind and is likely to be frequent in the wounds of warfare.—S. C. HARVEY, M.D., in *Jour. Maine M. A.*, Sept., 1943.



Low Back Injuries

Treatment of thoracic, lumbar and sacral spinal cord injuries by extension of the back: Two blankets are rolled up and placed between the mattress and boards. An additional blanket is added daily until hyper-extension is obtained. After eight weeks, a plaster cast is applied, with the spine still in extension.—DONALD MONRO, M.D. in *New England J. M.*, Vol. 233.

Contact, Infective and Infective-Allergic Dermatitis of the Hands

The scheduled title of this lecture, "Dermatophytosis," well illustrates the first problems—to get the medical man over the idea that a single causal agent, and a fungus acting alone at that, accounts for all or most dermatitic and especially vesicular and vesicopustular eruptions of the hands and feet. Having endured the blistering scorn of internists at our hesitancy in calling foot rashes, especially interdigital ones "dermatophytosis" when to the medically experienced (sic) eye they are obviously "athlete's foot," we have become dogged in our insistence that the mycotic be invoked only when pathogenic fungi are demonstrable. All other rashes, hand or foot, and in fact the fungous ones too, are compound affairs, susceptible of being designated after adequate study by such titles as mycotic-pyogenic, mycotic or pyogenic-allergic (or both), contact-allergic or contact-infection (mycotic or pyogenic) allergic lesions.

Fissures of Lips

A useful device for treatment was learned from the late William Allen Pusey, who used it to heal fissures of the lip. With or without a preliminary touch of Castellani paint, a patch of cotton roller bandage, the edges frayed to increase its hold on the skin, is pasted over the fissure by several applications of flexible collodion. Pain quickly disappears and the most refractory fissure usually heals in forty-eight hours, the patch detaching itself, renewable as occasion may require. Preliminary sandpapering of thickened keratotic skin reduces likelihood of recurrence.—J. H. STOKES, M.D., in *Jour. A. M. A.*, Sept. 25, 1943.



DIAGNOSTIC POINTERS

Tarry Stools

• Unless one cross-questions the patient who says that he has had tarry stools, one will make many a wrong diagnosis of peptic ulcer.

Did the man get weak? Did he faint, and did he have to be helped into bed? Was he later found to be anemic, and did he have to stay in bed for days or weeks afterward?

The absence of any such symptoms should cause the physician to regard the story with scepticism although hemorrhage is not ruled out. The patient may have been taking bismuth or other substance that caused darkening of the stools.

If the hunger, pain, and indigestion disappeared right after the apparent hemorrhage, hemorrhage may actually have occurred because this so typical of what often happens in cases of bleeding ulcer that the observation has diagnostic value.—W. ALVAREZ, M.D., in "Nervousness Indigestion and Pain" (Hoeber, Publisher).

Cardiospasm

• Patients with cardiospasm should be studied as physical and emotional problems. Esophageal spasm has been directly observed (through the esophagoscope) after directing the patient's attention toward his emotional conflicts.—F. H. HESSER, M.D., in *South. Med. & Surg.*, April, 1944.

Hemorrhoids Are Not Painful

• When hemorrhoids become painful, a complication has appeared (or another disease in addition to the hemorrhoids).—W. J. MARTIN, M.D., in *South. Med. & Surg.*, May, 1944.

Significance of Nasal Obstruction

• The presence of nasal obstruction suggests acute or chronic rhinitis, allergic rhinitis (including hay fever, vasomotor rhinitis or nasal polyps), foreign body, or gross deviation of the septum.—F. L. WEILLE, M.D., in *Med. Clin. N. Am.*, Sept., 1944.

Poliomyelitis: Early Diagnosis

1. Neck rigidity.
2. Spinal tenderness.
3. Spasm, tremor or weakness in muscle groups.
4. Pain or hyperesthesia.
5. Reflex changes.
6. Abnormal spinal fluid findings (not present in one third of early cases):
 - (a) Increased pressure, total proteins number of cells;
 - (b) Fluid is sterile; rules out meningitis.
7. Headache and fever.—J. Omaha Mid-West Clinical Soc., Aug., 1944.

Nervousness

• I always make mental note of the fact that a woman has some deformity such as an ugly birthmark, a squint, big legs, great tallness, or much hair on the face. Such things are a constant source of humiliation and suffering. More than once I have helped a psychopathic woman, with a hairy face, straighten out her nervousness, by getting her to shave every day.—W. C. ALVAREZ, M.D., in "Nervousness, Indigestion and Pain" (Hoeber, Publisher).

Tuberculosis in Elderly People

• The importance of tuberculosis in elderly people, especially pulmonary tuberculosis, has been generally underestimated. The mortality from tuberculosis is much higher in the later decades of life than among young people, especially between ages 55 and 65.

Older persons have coughed up positive sputum for many years and are responsible for many more cases than are younger patients.

A large proportion of the patients have fibrotic lesions which produce few symptoms, and are thus at home, rather than in a sanatorium. Aging tissues are less susceptible to inflammatory processes than growing ones, and tend to develop fibrous change, obliteration of the lymphatics and involutional changes which may render the body resistant to the spread of tuberculosis.

Many elderly persons who have definitely recognizable tuberculosis with positive sputum are little affected by the toxic effects of the disease (the "good chronics"). They do not consider themselves ill.—Tub. Abstracts, Feb. 1945.

(Elderly persons who are tired or who lose weight or who have a persistent cough should have a chest x-ray.—Ed.)



THUMBNAIL

THERAPEUTICS

Recurrent Auricular Fibrillation

• Recurrent auricular fibrillation may be treated with quinidine, in doses of 6 grains, at 2 hour intervals, for one to three doses. If the attacks are almost daily, quinidine should be stopped and digitalization begun which establishes the auricular fibrillation permanently, and keeps the ventricular rate under control. After digitalization has been attained, the dose is reduced until one dose of digitalis is taken daily (1 to 1½ gr. of powdered leaf in tablet or capsule form) enabling the patient to live a normal life. P. D. WHITE, M.D. in *M. Clin. North America*, Sept. 1944.

Abdominal Distention in Infants

• Abdominal distention in infants is treated by enemata, rectal tubes, heat to the abdomen, and in certain cases, by pitressin 0.5 to 1.5 units intramuscularly or prostigmine methylsulfate 0.25 to 1 cc. of a 1:4,000 solution intramuscularly or subcutaneously.—E. L. PRATT, M.D. in *M. Clin. North America*, Sept. 1944.

Prevent Postoperative Thrombophlebitis

• Exercise of the feet in bed during the postoperative period prevents many pulmonary emboli. Hospital personnel should be ordered to remind patients to wiggle their toes and feet one thousand times a day.—J. A. EVANS, M.D. in *Conn. S. Med. J.*, Feb., 1944.

Impetigo

• Once healing has become well established and the disease is not extending, the removal of crusts should not be undertaken too vigorously. At this stage, calamine lotion tends to promote drying-up of the lesions. In resistant cases, a mild erythema dose of ultraviolet every second day is often helpful.—A. C. ROXBURGH, M.D. in *Med. World (Lond)*, Apr. 28, 1944.

Pyelitis in Pregnancy

• The use of sulfonamide drugs causes a prompt subsidence of symptoms in most cases of pyelitis of pregnancy. This should not be taken to mean that a cure has resulted, until examination over a period of one year or more fails to show a recurrence of the pus in the urine.

Ambulatory patients receive 2 Gm. (30 gr.) of sulfadiazine or sulfathiazole daily for 6 days with 4 Gm. (60 gr.) of sodium bicarbonate three times daily. Bed patients receive 4 Gm. as the initial dose and 2 Gm. daily for five or six days, together with ample fluids. Drug therapy is not continued beyond that point even if cure is not obtained. The patient is kept on a high fluid intake and treatment resumed later when tolerance for the infection has been established.

Recurrence of pyuria after delivery is an indication for urologic study.—E. G. CRABTREE, M.D. in *J.A.M.A.*, Nov. 24, 1944.

Hemolytic Jaundice

• The treatment of hemolytic jaundice consists in the removal of the enlarged spleen. The cardinal signs are: 1. Acholuric jaundice; (normal colored stools) 2. Anemia; 3. Enlarged spleen; 4. Crises with pain and fever; 5. Increased fragility of the red cells; 6. Negative Vander Bergh test; 7. No itching.—E. O. HORNE, M.D. in *Am. J. Surg.*, July 1944.

Tar-Sulfadiazine for Eczema

• Sulfadiazine can be incorporated into the carbonis detergens cream used for eczema without any difficulty. The "Tar-bonis" cream now on the market may be used for such addition.—L. EMMETT HOLZ, JR., M.D.

Retinal Hemorrhage in New-Born

• Give 50 cc. of maternal or paternal blood (after grouping) intravenously, or 10 cc. into the buttocks, twice daily for two or three days. Inject intramuscularly vitamin K (5 mgm. in 1 cc.) and repeat if there is a deficiency of prothrombin.—E. E. N. T. M., Oct. 1943.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

METABOLISM MANUAL

Lex

METABOLISM MANUAL. By Jessie K. Lex, R.T., M.T. (ASCP), Chief Medical Technologist and Chief X-ray Technician, Diagnostic Clinic of George W. Parker, M.D. and George M. Parker, M.D., Peoria, Illinois.—The Waverly Press, 1943. Price \$1.75.

This pocket size manual gives all the information necessary for a physician or technician to carry out metabolic rate determinations, and, more important, to know when the results are not accurate and why. Many reproductions of graphs show various mechanical flaws and wrong behavior on the part of the patient, so that the fault can often be recognized by the typical graph obtained. Methods of handling the difficult patient are emphasized.

PRIMER OF SCLEROTHERAPY

Biegeleisen

PRIMER OF SCLEROTHERAPY: Injection Treatment. By H. I. Biegeleisen, M.D., New York: Froben Press (4 St. Luke's Place), 1944. Price \$2.00.

This book is of value to the layman who wants to know about the injection treatment, what it will and won't do, and what conditions may be treated. This educational material saves the physician's time by doing the explaining for him.

Contents: Varicose veins, phlebitis, ulcers, eczema, swollen legs, capillary veins, hernia, hydrocele, varicocele, hemorrhoids, fissure, pilonidal cyst, bursitis, ganglion, angiomas, limitations of sclerotherapy.

Criticism: During the main body of the work, injection therapy is praised as almost the perfect treatment and it is only in the final chapter that the limitations of sclerotherapy are mentioned.

There are no illustrations and many of the conditions might be better brought out by simple pen and ink sketches.

The author has carried out much original work in sclerotherapy. We await with interest his forthcoming textbook on the technic of injection treatment.

MODERN CLINICAL SYPHILOLOGY

Stokes

MODERN CLINICAL SYPHILOLOGY: DIAGNOSIS-TREATMENT-CASE STUDY. By John H. Stokes, M.D., Professor of Dermatology, and Syphilology, University of Pennsylvania; Herman Beerman, M.D., Sc.D., Assistant Professor, Syphilology, University of Pennsylvania; Norman R. Ingraham, Jr., M.D., Assistant Professor, Dermatology and Syphilology, University of Pennsylvania; and Associates. Third Edition.—W. B. Saunders Co., 1944. Price \$10.00.

Both clinical and laboratory aspects of syphilis are fully discussed in their most modern aspects. Treatment is presented in great detail. There is a freshness and stimulating drive that makes syphilis a dramatic subject. Case histories are given so that

methods of diagnosis and treatment may be readily grasped. Almost one thousand illustrations and figures bring out important points. This book is a must for every man who wishes to diagnose or treat syphilis.

ATLAS OF THE BLOOD

Blackfan

ATLAS OF THE BLOOD IN CHILDREN. By Kenneth D. Blackfan, M.D. Late Rotch Professor of Pediatrics, Harvard Medical School, Boston, Louis K. Diamond, M.D., Assistant Professor of Pediatrics, Harvard Medical School. Illustrations by C. Merrill Lester, M.D., Associate Pediatrician, St. Luke's Hospital, Bethlehem and Allentown General Hospital, Allentown, Pennsylvania.—The Commonwealth Fund, 1944. Price \$12.00. This is more than an atlas of eminently usable color plates illustrating various blood diseases in children, it is a clinical text of real value in making the differential diagnosis between various hematologic disorders in these young patients.

Many of these patients were followed from childhood into adult life, so that the observations are consecutive, rather than isolated, and one gains the feeling of change in the blood stream.

Each of the 70 color plates is complemented by a line drawing handily placed on the opposite page, which points out and describes the various cells that are portrayed.

The text is brief but very usable, containing, as it does, descriptions of the various diseases (etiology, symptoms, morphological variations in the blood, and treatment, together with case histories.)

The authors are to be congratulated on this monumental work, and the Commonwealth Fund on making it available in such a beautiful, and relatively inexpensive form.

PHYSICIANS HANDBOOK

Warkentin and Lange

PHYSICIAN'S HANDBOOK. By John Warkentin, Ph.D., M.D. and Jack D. Lange, M.S., M.D. Third Edition.—University Medical Publishers, 1944. Price, \$1.50.

Compressed within the pages of this pocket size volume are all the details for the hundreds of tests and examinations that are used in office and hospital practice, exact directions to give the nurses caring for various types of illnesses, many tables showing the normals, the skin and serologic tests for all diseases in which they are employed, the diseases causing false positive Wassermann tests, how to open "frozen" or "stuck" syringes, modern pre and postoperative care and many, many other points.

ARTIFICIAL PNEUMOTHORAX

Rafferty

ARTIFICIAL PNEUMOTHORAX IN PULMONARY TUBERCULOSIS. By T. N. Rafferty, M. D., Phoenix, Arizona. Formerly, Resident Physician, Maybury Sanatorium (Detroit Municipal Tuberculosis Sanatorium, Northville, Michigan). Grune and Stratton, 1944. Price \$4.00.

This is a complete survey of the indications contra-indications, and management of compression (or as the author prefers to call it, relaxation) therapy with special emphasis on pneumothorax, and its management. The fact that pneumothorax without intrapleural severance of restraining adhesions is only a partially effective procedure should be known to more clinicians. The discussion is well balanced and clinically accurate.